STR-6055

134

⊗

Set using *ISO* screws

This manual provides service information for all modifications on STR-6055 model.

USA Model
Canada Model
EP Model
UK Model
AEP Model

SONY
VOLUME
LOUDNESS PUSH-OFF
TUNING
POWER
HEADPHONE
SPEAKER
TONE
BASS
TREBLE
HIGH FILTER
MUTING
MODE
MONITOR
FUNCTION
TAPE
PHONO
MHz

FM STEREO/FM-AM RECEIVER

SPECIFICATIONS

Fm Tuner Section

Tuning range:	87.5 MHz to 108 MHz
Usable sensitivity:	2.6 μV (IHF) 2.2 μV (S/N = 30 dB)
Signal-to-noise ratio:	70 dB
Capture ratio:	1.5 dB
Frequency response:	20 Hz to 15 kHz ±1 dB
Stereo separation:	38 dB at 400 Hz

A-m Tuner Section

Tuning range:	530 kHz to 1,605 kHz
Sensitivity:	48 dB/m, built-in bar antenna (S/N = 20 dB) 20 μV, external antenna
Signal-to-noise ratio:	50 dB

Audio Amplifier Section

Dynamic output power: (IHF constant power supply method)	145 watts (4 ohms), both channels operating 100 watts (8 ohms), both channels operating
Continuous output power: (rated output)	50 watts (4 ohms) per channel, both channels operating 40 watts (8 ohms) per channel, both channels operating 60 watts (4 ohms), each channel 43 watts (8 ohms), each channel
Harmonic distortion:	less than 0.2% at 1 kHz at rated output less than 0.1% at 1 watt output
Frequency response:	PHONO: RIAA curve ±0.5 dB TAPE: 10 Hz to 60 kHz REC/PB: 10 Hz to 60 kHz

General

Power consumption:	160 watts (USA Model) 200 watts (UK, AEP and EP Model) 160 VA (Canada Model)
Power requirement:	117 volts ac (USA and Canada Model) 100, 117, 220, 240 volts ac (EP, UK and AEP Model)
Dimensions:	440(w) × 148(h) × 345(d) mm $17\frac{5}{16}$ (w) × $5\frac{13}{16}$ (h) × $13\frac{9}{16}$ (d) inches
Net weight:	12 kg (26 lb 7 oz)

SONY®

SERVICE MANUAL

⊗ 134

TABLE OF CONTENTS

Section *Title* *Page*

1. TECHNICAL DESCRIPTION

1-1. Specifications 1
1-2. Detailed Circuit Analysis 2
1-3. Block Diagram 12
1-4. Level Diagram 15

2. DISASSEMBLY AND REPLACEMENT

2-1. Tools Required 16
2-2. Hardware Identification Guide 16
2-3. Top Cover and Bottom Plate Removal 16
2-4. Front Panel Removal 16
2-5. Dial Cord Restringing 17
2-6. Mechanical Dial Calibration 19
2-7. Dial Scale Replacement 19
2-8. Pilot Lamp Replacement 19
2-9. Tuning Meter Replacement 20
2-10. Control and Switch Replacement.... 20
2-11. Rear Panel Removal 21
2-12. Replacement of Components Secured to the Rear Panel by Rivets 22
2-13. Power Transistor Replacement 22
2-14. Chassis Layout 23

3. ALIGNMENT AND ADJUSTMENT

3-1. Fm I-f Strip Alignment 24
3-2. Fm Discriminator Alignment 25
3-3. Muting Adjustment 25
3-4. Fm Frequency Coverage Alignment 26
3-5. Fm Stereo Separation Adjustment 27
3-6. A-m I-f Strip Alignment 28
3-7. A-m Frequency Coverage and Tracking Alignment 30
3-8. Tuning Meter Calibration 32
3-9. Power Amplifier Adjustment 33

4. **REPACKING** 35

5. DIAGRAMS

5-1. Mounting Diagram – Loudness Control Board – ... 36
5-2. Mounting Diagram – Fm Front-End – 37
5-3. Mounting Diagram – Fm I-f Amp Board – 38
5-4. Mounting Diagram – A-m Cp/I-f Amp Board –...... 40
5-5. Mounting Diagram – MPX Decoder Board – 44
5-6. Mounting Diagram – Preamplifier Board – 46
5-7. Mounting Diagram – Tone Control Board – 47
5-8. Mounting Diagram – Power Amplifier Board – 48
5-9. Mounting Diagram – Power Supply Board – 50
5-10. Schematic Diagram – Tuner Section – 51
5-11. Schematic Diagram – Audio Amp Section – 55

6. **EXPLODED VIEWS** 57

7. **ELECTRICAL PARTS LIST** 61

SECTION 1
TECHNICAL DESCRIPTION

1-1. SPECIFICATIONS

Fm Tuner Section

Antenna:	300 ohms balanced
Tuning range:	87.5 MHz to 108 MHz
Sensitivity:	2.6 μV (IHF usable sensitivity) 2.2 μV (S/N=30 dB) 1.8 μV (S/N=20 dB)
Signal-to-noise ratio:	70 dB
Capture ratio:	1.5 dB
Selectivity:	80 dB
Image rejection:	70 dB
I-f rejection:	90 dB
Spurious rejection:	100 dB
A-m suppression:	65 dB
Frequency response:	20 Hz to 15 kHz ±1 dB
Separation:	38 dB at 400 Hz
Harmonic distortion:	Mono: 0.2%, IHF (400 Hz 100% Mod) Stereo: 0.5%, IHF (400 Hz 100% Mod)
19 kHz, 38 kHz suppression:	60 dB
SCA suppression:	55 dB
Muting level:	less than 5 μV

A-m Tuner Section

Antenna:	Built-in ferrite bar antenna with external antenna terminal
Tuning range:	530 kHz to 1,605 kHz
Sensitivity:	48 dB/m, built-in bar antenna (S/N=20 dB) 20 μV, external antenna
Signal-to-noise ratio:	50 dB
I-f rejection:	46 dB at 1,000 kHz
Harmonic distortion:	0.8%

Audio Amplifier Section

Dynamic output power: (IHF)	145 watts (4 ohms), both channels operating (constant power supply method) 100 watts (8 ohms), both channels operating (constant power supply method)
Continuous output power: (rated output)	50 watts (4 ohms) per channel, both channels operating 40 watts (8 ohms) per channel, both channels operating 60 watts (4 ohms), each channel 43 watts (8 ohms), each channel
20 Hz~20 kHz output power:	30 watts (8 ohms) both channels operating
Power bandwidth:	15 Hz to 30 kHz, IHF
Harmonic distortion:	less than 0.2% at 1 kHz at rated output less than 0.1% at 1 watt output
Frequency response:	PHONO : RIAA curve ±0.5 dB TAPE : 10 Hz to 60 kHz REC/PB : 10 Hz to 60 kHz
Input sensitivity and impedance:	PHONO : 1.8 mV 47k AUX : 140 mV 100k TAPE : 140 mV 100k REC/PB : 140 mV 100k
Signal output and output impedance:	REC OUT : 250 mV 10k REC/PB : 30 mV 80k
Signal-to-noise ratio:	PHONO : greater than 70 dB (weighting network "B") TAPE : greater than 90 dB (weighting network "A") REC/PB : greater than 90 dB (weighting network "A")
Tone controls:	BASS : ±10 dB at 100 Hz TREBLE : ±10 dB at 10 kHz

General

Power consumption:	160 watts (USA Model) 200 watts (EP, UK and AEP Model) 160 VA (Canada Model)
Power requirement:	117 volts ac (USA and Canada Model) 100, 117, 220, 240 volts ac (EP, UK and AEP Model)
Dimensions:	440(w) x 148(h) x 345(d) mm $17\frac{5}{16}$ (w) x $5\frac{13}{16}$ (h) x $13\frac{9}{16}$ (d) inches
Net weight:	12 kg (26 lb 7 oz)
Shipping weight:	16 kg (35 lb 5 oz)

1-2. DETAILED CIRCUIT ANALYSIS

The following describes the function or operation of all stages and controls. The text sequence follows signal paths. Stages are listed by transistor reference designation at the left margin; major components are also listed in a similar manner. Refer to the block diagram on page 12 to 14 and the schematic diagram on page 51 to 56.

Stage/Control	*Function*
Fm Front End	
Balun B1	This transformer matches 300-ohm twin lead to the fm front-end's input stage, thereby coupling the receiver signal to the front-end.
Passive rf circuit	A triple-tuned circuit is employed between the antenna and mixer transistor. This passive coupling circuit contains no active amplifiers, so it is perfectly linear and cannot produce distortion and overload components. Thus, the factors that contribute to spurious responses are eliminated ahead of the mixer.
Local oscillator L104, Q102	Supplies heterodyning voltage to the mixer via L104. The circuit is a modified Hartley type with feedback applied to the emitter of Q102 from the tap on L104.
AFC circuit D101, D102 C120	An automatic frequency control circuit is incorporated in the oscillator circuit to eliminate frequency drift and precise tuning difficulty. The principle of afc operation is as follows: When the tuner is correctly tuned, the intermediate frequency is 10.7 MHz and no dc correction voltage is produced by the ratio detector as shown in the "S" curve response of Fig. 1-1. Thus the voltage applied to diode D101 is determined solely by the positive fixed reverse bias voltage supplied by zener diode D102. Now assume that the local oscillator frequency changes by +Δf. This means that the new intermediate frequency is 10.7-MHz +Δf. See Fig. 1-1. As the result a positive dc component is fed back to the anode of D101, decreasing the reverse voltage to it, and making D101's barrier capacitance increase. This decreases the local oscillator's frequency, since the series
C120	circuit composed of C120 and D101 is connected in parallel to the tank circuit of the local oscillator. Conversely, if the local oscillator frequency decreases a negative dc voltage is fed back to D101 increasing the local oscillator frequency.
Mixer Q101	RF signals and local oscillator voltage are heterodyned in the gate-source junction of mixer Q101 to produce 10.7 MHz i-f output signal.
IFT101	Transformer IFT101 and capacitor C106 and C107 form a 10.7 MHz "high-C" tuned circuit. This type of circuit has the advantage of reducing the higher order harmonics of 10.7 MHz which cause cross-modulation or spurious interference.

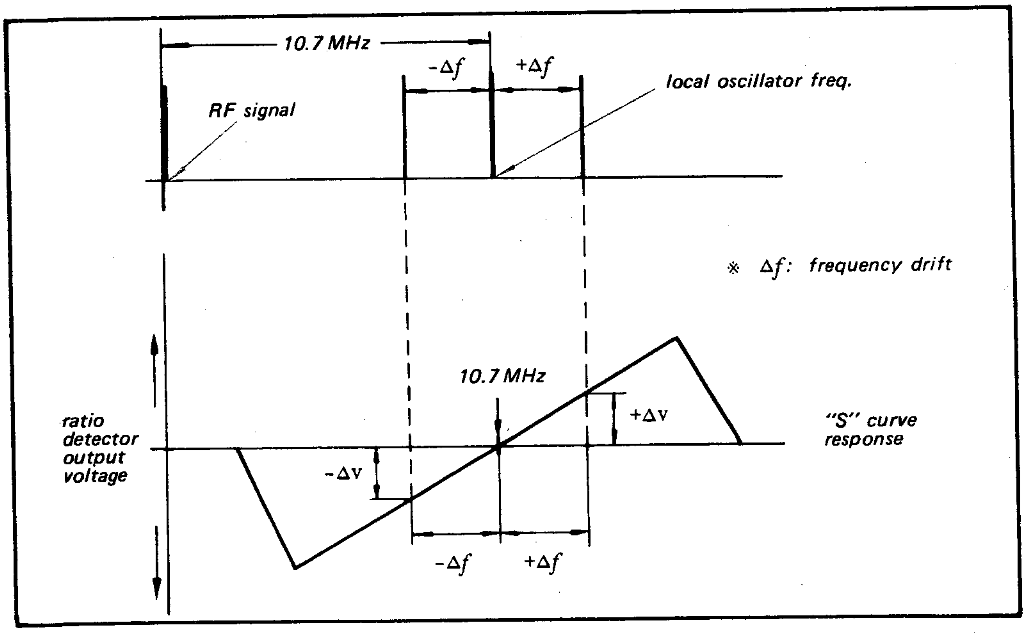


Fig. 1-1. Local oscillator frequency drift and afc voltage relationship

Stage/Control	*Function*
I-f preamplifier Q103	The i-f signal coupled to the base of i-f preamplifier Q103 by the secondary winding of IFT101 is amplified to achieve a favorable signal-to-noise ratio before application to the filters in the i-f strip.
I-f Amplifier	
I-f amplifiers Q201 to Q205 CF201 to CF206	These i-f stages are basically RC coupled amplifiers (except Q205) that provide essentially flat response. The selectivity of this section is determined by three pairs of filters CF201, CF202, CF203, CF204, CF205 and CF206 in the interstage coupling path. Each of these filters is a two-section ceramic filter that operates in the "trapped-energy" mode. The filters provide extremely-sharp skirt selectivity and flat response inside the passband. Thus, these filters largely determine overall tuner selectivity.
I-f output Q206	Signal at the base of Q206 has had all amplitude variations removed by the preceding limiters, and only selected signals have been passed by ceramic filters. Q206 provides power to drive the ratio detector.
Diode limiters D201 to D206 D209, D210	Limiting is accomplished by diode pairs, connected in parallel and poled in opposite directions. The diodes conduct when the signal across them exceeds the barrier potential of about 0.6 volts in the forward direction. Thus the signal is limited in both directions to 1.2 volts peak-to-peak. The diodes provide symmetrical limiting.
Ratio detector D207, D208	T201 and diodes D207 and D208 form a balanced ratio detector that transforms the frequency-modulated signal into an audio signal. Output appears across C216.
Muting circuit Q207, Q208, Q209, Q210 D211 to D213	The i-f signal is extracted from limiter diodes D203 and D204 to drive the muting circuit. The extracted i-f signal is amplified by Q208 (FET) enough to drive voltage doubler D212 and D211 through tuned transformer T202. D213 provides positive fixed bias for Q209 through D212 and D211. T202 determines the bandwidth necessary to con-

Stage/Control	*Function*
	trol the muting circuit without generating interstation or detuning noise. The output of the voltage doubler is a positive dc voltage proportional to the carrier levels of weak rf signals. Q209 and Q210 form a switching circuit which is driven by the voltage doubler. Q209 is normally cut off, thus forcing Q210 into conduction. The collector of Q210 is connected to the gate of FET Q207 through MUTING switch S7. FET Q207 acts as an electronic switch which is inserted between the ratio detector and MPX decoder, and is controlled by the gate voltage applied. With the MUTING switch ON, fm signals of average strength keep Q209 saturated, thus cutting off Q210. This causes Q207 to conduct and maintain normal operation. Weak stations and interstation noise can not produce sufficient dc voltage at the base of Q209 to keep it conducting. As a result, Q209 cuts off. This saturates Q210 and cuts off Q207, accordingly, the audio output is muted. With the MUTING switch OFF, Q207 is kept conducting regardless of the strength of the fm signal by a positive bias voltage on its gate. RV201 adjusts the muting level.
Stereo-mono automatic-switching circuit Q210, D409	The collector of Q210 is also connected to the output terminal of the MPX decoder's frequency doubler through diode D409. This prevents noisy stereo reception by automatically switching the MPX decoder's operation into the monaural mode. This is needed because in fm stereo broadcasting, the S/N ratio of a demodulated stereo signal degrades much more rapidly than that of a mono signal when the input signal strength decreases. As Q210 is forced into conduction by weak stations, the frequency doubler's output is effectively grounded, stopping the operation of the stereo demodulator. Thus, automatic switching of stereo to mono level is achieved according to the input rf signal.
TUNING meter M901	In fm mode, center-zero meter assures correct tuning by utilizing the ratio detector's characteristic.
R263	As indicated in Fig. 1-1, no dc voltage is produced across R263 when the tuner is correctly tuned. Deflection on the meter indicates the amount of deviation from the carrier frequency received. Note that the meter will indicate zero-reading when the tuner is not receiving any off-the-air signal.
SCA trap L203, C220	The composite signal containing monaural information from 0 to 15 kHz, the 19 kHz pilot carrier, and the fm stereo signal at 38 kHz is fed to Q207 through trap L203-C220. This trap removes the unwanted SCA signal to the base of Q401 (the 19 kHz amplifier) through Q207.
MPX Decoder	
19 kHz amplifier Q401	This stage serves two functions. It extracts the 19 kHz pilot signal by means of a tuned circuit at its drain, and provides a low-impedance source of composite stereo signal (without pilot carrier) at its source. By using an FET, harmonics of the 19 kHz and 38 kHz components are reduced to a low level thereby causing less carrier leak or beat interferance.
Frequency doubler D401, D402	Signals developed at the collector of Q401 are transformer coupled to a fullwave rectifier consisting of D401 and D402.

Stage/Control	*Function*
	The output of this rectifier is not filtered, resulting in two positive pulses for each input cycle. Thus, the 19 kHz pilot-carrier frequency is effectively doubled by D401 and D402. However, the waveform is not sinusoidal at the base of Q402.
38 kHz amplifier Q402	The 38 kHz pulses produced by D401 and D402 are amplified by Q402. The tank circuit at the collector of Q402 is tuned to 38 kHz to restore these pulses to a sinusoidal waveform. This signal is transformer coupled to the bridge-type demodulator to supply sampling drive for the demodulator.
STEREO lamp circuit Q403	The STEREO indicator lights when the FUNCTION switch is set to the FM-AUTO STEREO position and an fm stereo signal is received. The emitter of Q402 is connected to the base of Q403 (which is normally cut off). The circuit operates as follows: When a composite stereo signal is applied to the multiplex decoder, the 38 kHz pulses produced at the output of the frequency doubler yield a higher average current flow through Q402. This forces Q403 into conduction, lighting STEREO indicator lamp PL904.
Multiplex demodulator D405, D406, D407, D408	The demodulator circuit employs four diodes in a balanced-bridge arrangement. This system has the advantage of cancelling residual rf components (38 kHz signal, some 19 kHz signal, and higher-order harmonics of these frequencies.) "L" and "R" components are developed at each side of the bridge as the result of demodulation, when the receiver is operated in the stereo mode. In the monaural mode, diodes D405 and D408 are forward biased by supply voltage through R405, the stereo indicator lamp, R412, R414, and R413, so these diodes merely act as small resistances. Under this condition, the monaural signal is applied to both "L" and "R" audio amplifiers.
De-emphasis capacitors C413, C414, C422, C423	These capacitors provide the roll off at high audio frequencies necessary to compensate for pre-emphasis at the transmitter. S10 should be set to the proper time constant. Specified de-emphasis time constant is 75 micro-seconds in USA and CANADA, 50 micro-seconds in Europe.
Audio preamplifier Q404, Q405 Q406, Q407	Demodulated L and R signals are amplified by these stages to the level required at the input of the following low pass filter.
Separation control RV401	The network that connects the emitters of Q404 and Q405 provides a form of negative feedback between left and right channels. Any residual "L" signal in the "R" channel (which is about 180° out of phase) is cancelled out by the "L" signal from the "L" channel. The same is true of residual "R" signal in the "L" channel. RV401 is therefore set for maximum separation.
LPF401	Filters out the unwanted higher-order harmonics of 19 kHz and 38 kHz leakage to obtain clear audio.

A-m Tuner

Note: As two kinds of a-m circuit exist due to production changes, we describe the each circuit operation corresponding to respective serial numbers.

USA Model	Serial No. up to 810,400
Canada Model	Serial No. up to 700,300
EP Model	Serial No. up to 553,000

Local oscillator Q305	This stage supplies injection voltage to the mixer via L303. In

Stage/Control	*Function*
	this oscillator circuit feedback is applied to the emitter of Q305 from low-impedance winding on oscillator coil L304.
Mixer Q301	Incoming rf signals and local-oscillator voltage are heterodyned in the base-emitter junction of Q301 to produce the 455-kHz output. FET Q302 couples the output of the mixer to IFT-301. This stage functions as the gain control element of the AGC system as will be explained later. IFT301 is a transformer tuned to 455 kHz. It develops the i-f signal, and provides a path to ground through bypass capacitor C307 for the other heterodyne products. The low-impedance output winding of IFT301 provides link coupling to i-f amplifier Q303.
I-f amplifier Q303 CF301	This stage is basically an RC-coupled amplifier. The selectivity of the stage is determined by a double ceramic filter (CF301) in the interstage-coupling path. This filter provides extremely sharp skirt selectivity inside the passband.
I-f amplifier Q304	This circuit provides the power to drive diode detector D302.
Detector D302	The i-f signal from the secondary of IFT302 is rectified by diode D302. The i-f components of the output signal are filtered by C317, C318, and R320. The output appearing across R322, R323 is therefore clean audio.
TUNING meter M901	In a-m mode, deflection on this meter indicates the relative signal strength of the selected a-m station. The a-m i-f signal is extracted from secondary winding of IFT302 to drive TUNING METER M901. The extracted i-f signal is rectified by D303. The negative dc component at the anode of D303 is filtered by C313, R336, and fed to the TUNING METER.
Agc circuit	The negative dc component at the anode of diode D302 is filtered by R325, C336, C335, R335, C322, R326, C323 and fed back to the gate of Q302 to control its gain. The time constants of the agc filter components remove audio variations from the agc voltage.

USA Model............ Serial No. 810,401 and later
Canada Model ...... Serial No. 700,301 and later
EP Model............... Serial No. 553,001 and later
UK Model .... Serial No. 600,001 and later
AEP Model............ Serial No. 900,001 and later

Antenna circuit	A-m signals are received by the antenna tank circuit formed by L904, C302, L902, CV901, CT301, C305 and C304. C302 is selected not for its effect upon tuning, but to reduce spurious radiation by the local oscillator.
Low-pass filter L301, C302	The low pass filter (L301 - C302) reduces the spurious radiation caused by local oscillator which may interfere another receiver or communication system through the external antenna.
Local oscillator Q305	This stage supplies the injection voltage necessary to receive a-m signal. In this modified Hartley oscillator circuit, feedback is applied to the emitter of Q305 from a low-impedance winding on oscillator coil T301.
Mixer Q301	Incoming rf signal is fed to the base of Q301, while the local oscillator voltage is injected to the emitter circuit of Q301. These two signals are heterodyned in the base-emitter junction of Q301 to produce the 455-kHz output. This stage functions as the gain control element of the agc system due to Q302 in the emitter circuit, as will be explained later.
CFT301	CFT301 is a combination unit which contains a double-tuned circuit and one ceramic filter

Stage/Control	*Function*
	tuned to 455 kHz. It develops the i-f signal, and determines the selectivity inside the pass-band. It also provides link coupling to i-f amplifier Q303.
I-f amplifier Q303	This stage is basically an RC-coupled amplifier and amplifies the i-f signal to the proper level required by the following stages.
I-f amplifier Q304	Q304 and IFT301 form a tuned amplifier circuit which provides power to drive diode detector D302.
Detector D302	The i-f signal from the secondary side of IFT301 is rectified by diode D302. The i-f components of the output signal are filtered by C318, R320 and C319 and then cleaned audio signal is fed to the audio preamplifier through FUNCTION switch S1.
TUNING Meter M901	The detector (D302) output is also fed to TUNING meter M901 as the dc component in the rectified a-m signal is roughly proportional to the input signal level (not exactly for strong signals due to agc action).
AGC circuit	There are two feedback loops which provide proper agc operation. One is the minor loop applying AGC to the i-f amplifier Q304 base circuit. The other is the major feedback loop applying dc from the emitter circuit of Q304 to the emitter circuit of Q301 through Q302. The minor feedback loop consists of D301, R317, C326, R326, C325 and R314. The a-m i-f signal is extracted from the collector circuit of Q304 through C314 and rectified by diode D301. The output of the diode D301 is a positive dc voltage roughly proportional (not exactly due to agc action) to the carrier levels of input signal and fed to the base of Q304 through a filter circuit. Thus the output of diode D301 controls the current flow in Q304 and its emitter voltage as well. Major feedback is produced by the emitter circuit of Q304, R315, C322, C321, R325 and Q302. The emitter voltage of Q304 is applied to the base of Q302 through the filter circuit, determining the positive bias on Q302. As the Q302 shunts the emitter resistor of mixer Q301, it controls the operation of Q301 as a forward agc element. When the strong signal is received, Q302 is forced into conduction, shorting Q301 emitter to ground through R305. As a result, current flow in the Q301 (mixer) increase, reducing its current gain and allowing stable operation in a strong field-strength area.

Preamplifier Section

Equalizer amplifier Q501, Q502	These direct-coupled stages amplify the small signal provided by the phono cartridge to the level required at the input of the following tone-control amplifier.
Bias circuit R503, R508	Dc bias voltage for Q501 is extracted from R508 in the emitter circuit of Q502 and fed back to the base of Q501 through R502 and R503. This dc negative feedback technique provides stable operation during temperature changes.
Equalization circuit R509, R510, R511 R505 C505, C506	RIAA equalization is achieved by the negative-feedback loop containing R509, R510, R511, R505, C505 and C506. Be sure to use replacement components with the exact same values.
Equalization circuit	R513 (R563) in the output circuit prevents interaction between left and right channel-equalization when the MODE switch is set to L+R.

Stage/Control	*Function*
MODE switch S4	In the STEREO position of S4, left and right input signals are routed to their respective amplifiers. In the L + R position, the left and right signals are added and the sum is then fed to both amplifier channels. A rotary switch having two sections is used to obtain L + R signal even if the MONITOR switch is set to the TAPE position.
VOLUME control RV601 (RV651)	The equalized phono signals and signals applied to the other input terminals are fed to the VOLUME control through the MONITOR and MODE switches. The level of the signal applied to the following tone-control amplifier is determined by the setting of RV601.
LOUDNESS switch S5	This switch and R601, R602, C601, C602 compensate for the characteristics of the human ear which vary according to the loudness of the sound being heard. When this switch is set to ON and the VOLUME control is set for 30 dB attenuation, the overall frequency response is increased 10 dB at 50 Hz and 4 dB at 10 kHz with reference to the level at 1 kHz.
Tone-control amplifier Q601, Q602 (Q651, Q652)	This direct-coupled two-stage amplifier has basically flat response, but it operates as a negative-feedback type tone-control circuit. The output generated at the collector circuit of Q602 is fed back to the emitter circuit of Q601 through the treble and bass tone-control network.
TREBLE control RV603 (RV653)	Increases or decreases the amount of negative feedback voltage determined by the setting of RV603. It has a range of ±10 dB at 10 kHz.

Stage/Control	*Function*
BASS control RV604 (RV654)	Similar to the treble control except for filter components and frequency characteristics, however in this circuit the negative feedback voltage is determined by the setting of RV604. This has a range of ±10 dB at 100 Hz.
HIGH FILTER S6	The high-cutoff filter (R616 and C613) eliminates unwanted high-frequency components (5 kHz and higher) from the input signal when this switch is ON.

Power Amplifier Section

Preamplifier Q701, Q702	Q701 and Q702 form a paraphase amplifier but signal output is extracted from the collector circuit of Q701. This circuit has a various advantages in direct coupling system. One is high stability despite temperature variations and another is high input impedance without reducing the amplifier's gain. The ac output appears across load resistor R705 (R755) in the collector circuit. An emitter decoupling dircuit is formed by the emitter-base resistance of Q702, C702 and R708 in the base circuit of Q702. This circuit forms a frequency-selective ac bypass circuit to reduce the amplifier's gain at very low frequencies. Common emitter-resistor R706 keeps the dc current flow constant in the Q701 and Q702, thus increasing dc stability.
Bias power supply D701, D751	These diodes are forward biased by positive and negative power supply voltage through RV701 and RV751. They provide a stabilized voltage to bias transistor Q701 that is used to make the output terminal balance at zero dc through RV701.
Dc balance adj. RV701 (RV751)	

Stage/Control	*Function*
Thermal compensation and noise suppressor D711	As all the stages are directly coupled, dc stability is required. The negative temperature coefficient of D711 provides thermal compensation for the following driver stage. It also acts as a noise suppressor to reduce the popping noise due to unbalanced current flow in the following stages when the power switch is turned off.
Driver Q703	Though this stage is a conventional flat amplifier, it determines the output voltage swings because the following stages are basically in the emitter-follower configuration. The ac load resistor for this stage is R712.
Dc bias adj. (idling current) Q704, RV702	Q704 is forced to conduct and operates as a small resistance providing the necessary forward bias on the two cascaded emitter-followers. RV702 controls the base bias of Q704, determining the impedance between the emitter and collector of Q704, and thereby controls the dc bias voltage for the following complementary circuit.
Thermal compensator for dc bias D702	The negative temperature coefficient of D702 provides thermal compensation for the complementary and power transistor circuits. D702 is attached to the power transistor's heat sink to detect temperature change in the power transistors.
Complementary circuit Q707, Q708	These transistors operate as emitter-followers to provide the current swings demanded of the output stages and also provide the necessary phase inversion. Phase inversion is performed by using PNP and NPN type transistors.
Power transistor Q709, Q710	The output transistors (Q709 and Q710) are connected directly to a power supply of about ±40V. Q709 supplies power to the load during the positive half cycle and Q710 operates during the negative half cycle. As all the stages are directly coupled and designed to obtain zero potential at the output terminal, the large coupling capacitor at the output (which may cause power loss or distortion at low frequencies) is eliminated.
Protection circuit	To protect overloaded power transistors from destruction, a new protection circuit is employed. If a short circuit at the output terminals occurrs, the protection circuit holds the current in the power transistor low enough not to make it overheat and also limit the input drive signals. Fig. 1-2 shows a partial schematic diagram detailing the protection circuit. With reference to this diagram, the protection circuit operates as follows: Since the protection circuit is identical for positive going half cycles and negative going half cycles, only the positive going half cycle operation is described here. Q705 limits the positive-going half cycle of the drive voltage applied to the base of Q707 when power consumption at the Q709 collector exceeds the safety margin. Since power dissipation at the collector can be considered a function of collector voltage and current, the trigger signal for Q705 is taken from the collector and emitter. Base voltage is partly determined by the ratio of resistance of R719 and series resistance of R726 and RL (load). Base voltage is also determined by the current flow in the R733 and the collector voltage of Q709. Under normal operation, Q705 is cut off.

Stage/Control *Function*

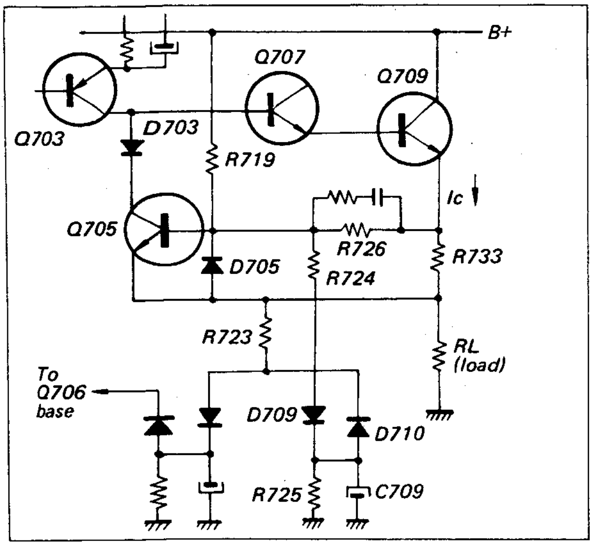


Fig. 1-2. Simplified protection circuit

When excessive current flows in the power transistor or power dissipation at the collector of power transistor exceeds the specified value, Q705 turns on and limits the input drive voltage to the power transistor. Limiting operation is also actuated by the condition of the load. The base voltage of Q705 is determined by the resistances R733, R726, R724, R725, and RL (load). D709 is employed to stop reverse voltage from applied being during the negative going-half cycle. Q705 turns limiting the input drive voltage to the power transistor when the load resistance decreases to some extent. Under reactive load conditions in class B amplifiers maximum current will flow when the voltage across the power transistor is maximum and this is the worst case for secondary breakdown. See Fig. 1-3. As all speakers have reactive properties, a protection circuit which covers the reactive region is required.

Fig. 1-3 shows the operating load lines for one half of a class B output stage under conditions of equal load impedance; in one case the load is purely resistive and in the other case purely reactive. It is apparent that the reactive load case could result in transistor failure. D710, C709 and R723 form a circuit charging the base voltage according to the reactive voltage induced in the load to obtain proper protection operation. C709 and R725 form a discharging circuit to detect reactive dc voltage. D705 protects Q705 from breakdown between base and emitter due to detected reactive voltage across C709. D703 protects Q705 from the breakdown between collector and emitter during the negative-going half cycle.

Stage/Control *Function*

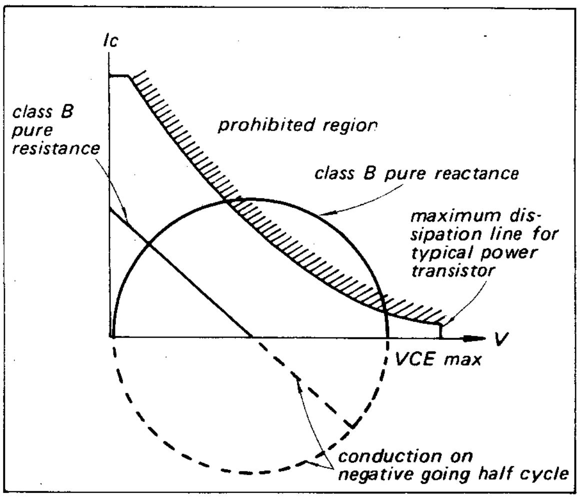


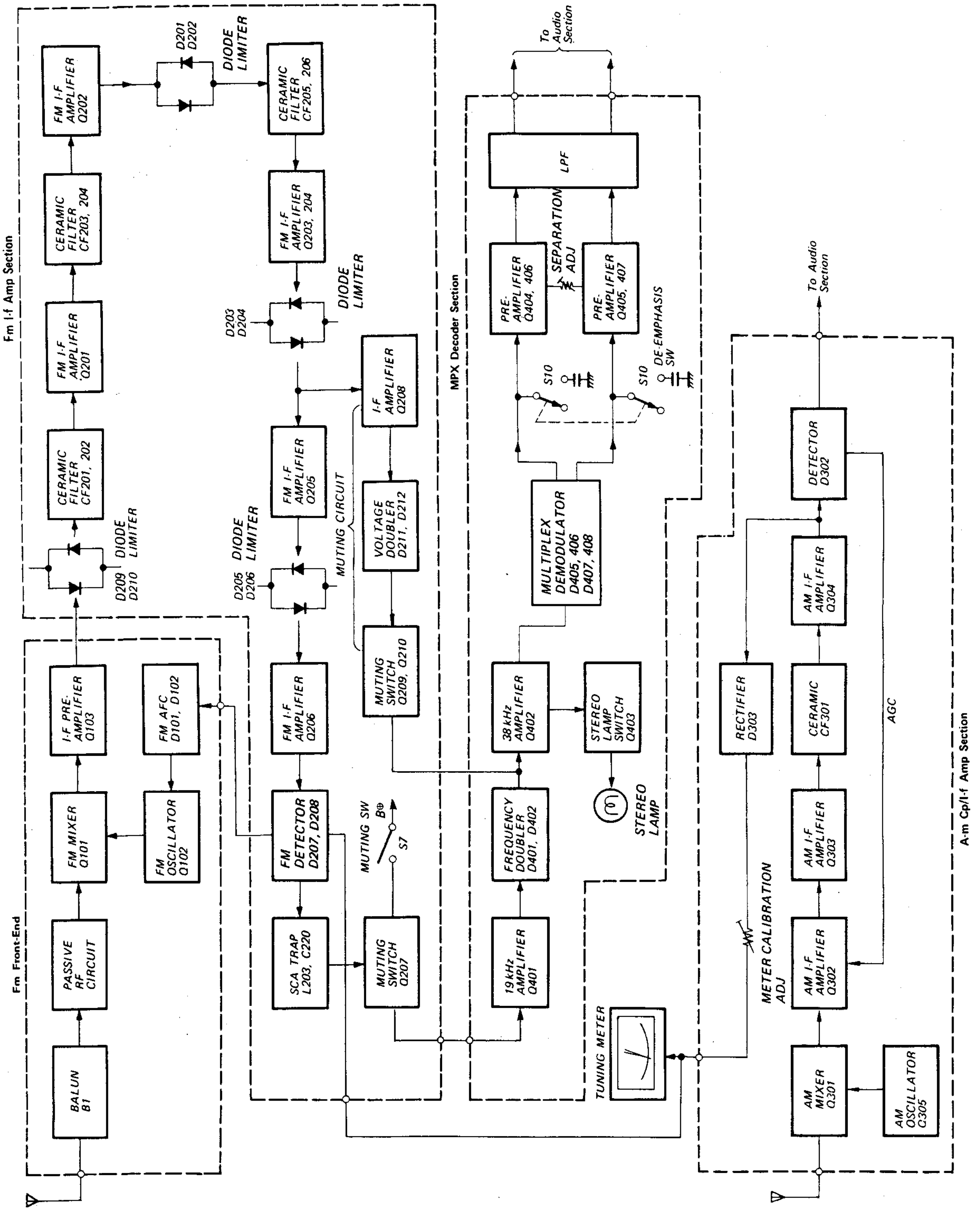
Fig. 1-3. Resistive and reactive load lines for class B output stage showing breakdown risk in purely resistive load

Stage/Control	Function
Power supply rectifier D801	A full-wave bridge rectifier provides a positive and a negative dc power supply for the power amplifier.
Rectifier D802	A half-wave rectifier (D802) and ripple filter (C809, R801, R802 and C810) supply well-filtered dc power to the preamplifier section.

Stage/Control	*Function*
Ripple filter Q711 R741, R740 C714, C713 Q761, R791 R790, C764, C763	These components reduce the ripple voltages in the dc power supply for the preamplifier and driver stages of the power amplifier section to an extremely-low value. Q711 and Q761 serve as an electronic filter to supply well filtered dc voltages of about ±37V to each stage.
Voltage regulator Q801, D803, D804	Dc output from the rectifier is filtered by C807 and applied to series regulator Q801. Since the voltage at the base of Q801 is kept constant by means of zener diodes D803 and D804, the emitter voltage remains constant regardless of load or line-voltage variations. The regulated and well filtered output of 15V is supplied to the tuner section.

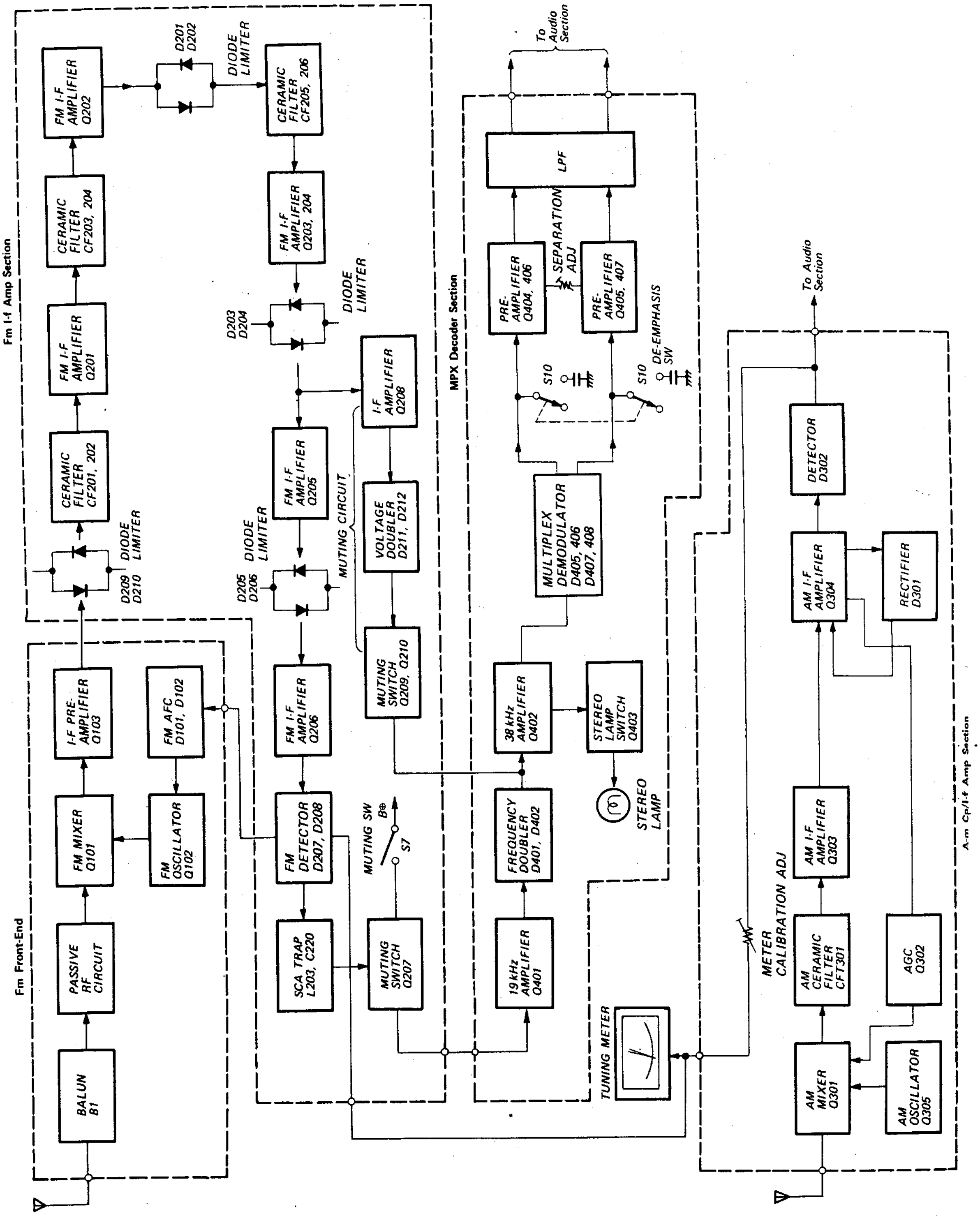
1-3. BLOCK DIAGRAM – Tuner Section –

Note: Applicable Serial Numbers:
USA Model .... Up to 810,400
Canada Model ..... Up to 700,300
EP Model .... Up to 553,000

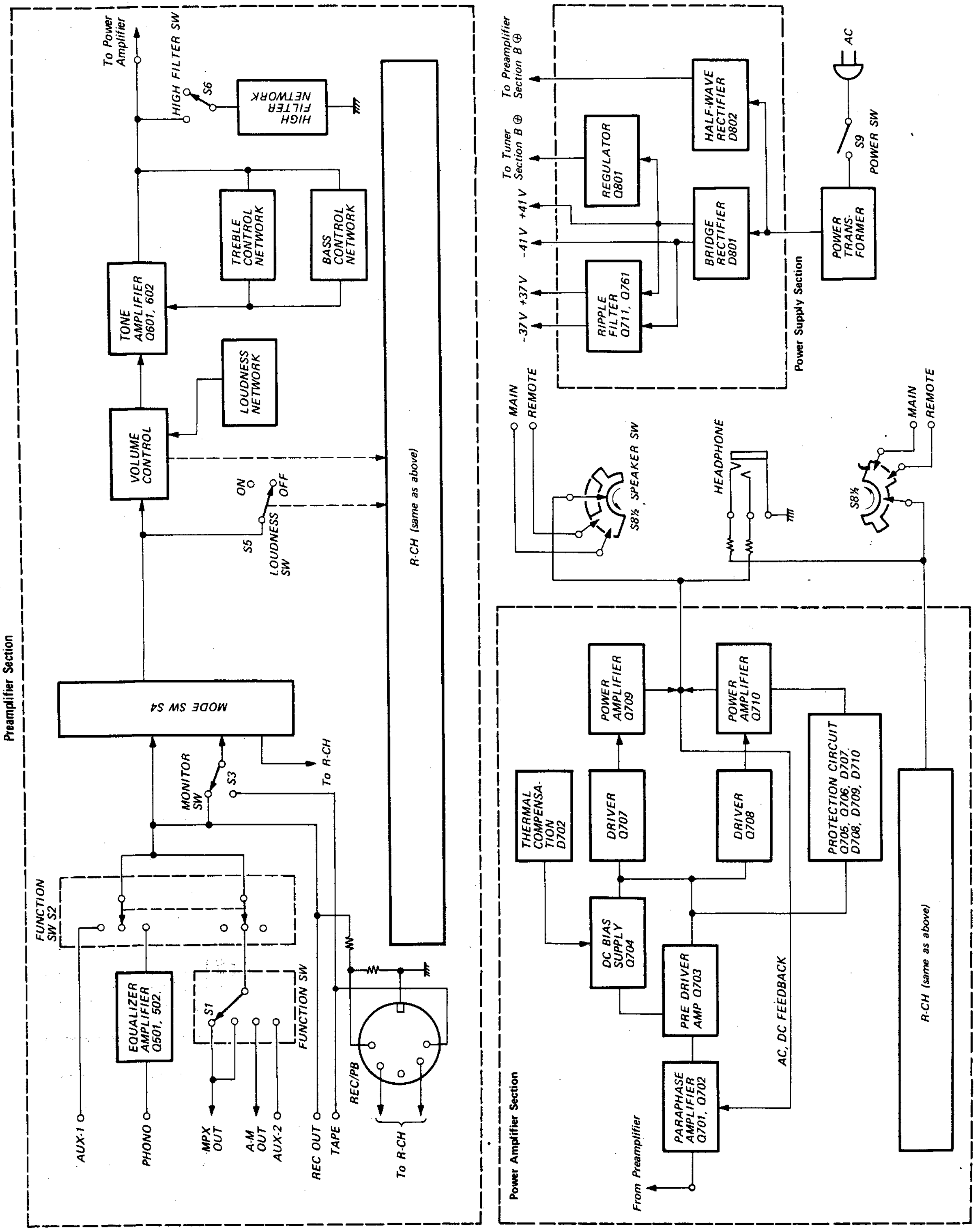

Fm Front-End
BALUN B1
PASSIVE RF CIRCUIT
FM MIXER Q101
I-F PRE-AMPLIFIER Q103
FM OSCILLATOR Q102
FM AFC D101, D102
Fm I-f Amp Section
DIODE LIMITER
D209 D210
CERAMIC FILTER CF201, 202
FM I-F AMPLIFIER Q201
CERAMIC FILTER CF203, 204
FM I-F AMPLIFIER Q202
D201 D202
DIODE LIMITER
CERAMIC FILTER CF205, 206
FM I-F AMPLIFIER Q203, 204
DIODE LIMITER
D203 D204
FM I-F AMPLIFIER Q205
DIODE LIMITER
D205 D206
FM I-F AMPLIFIER Q206
FM DETECTOR D207, D208
SCA TRAP L203, C220
MUTING SWITCH Q207
MUTING SW
B⊕
S7
I-F AMPLIFIER Q208
VOLTAGE DOUBLER D211, D212
MUTING CIRCUIT
MUTING SWITCH Q209, Q210
MPX Decoder Section
19 kHz AMPLIFIER Q401
FREQUENCY DOUBLER D401, D402
38 kHz AMPLIFIER Q402
STEREO LAMP SWITCH Q403
STEREO LAMP
MULTIPLEX DEMODULATOR D405, 406 D407, 408
S10
S10
DE-EMPHASIS SW
PRE-AMPLIFIER Q404, 406
PRE-AMPLIFIER Q405, 407
SEPARATION ADJ
LPF
To Audio Section
TUNING METER
A-m Cp/I-f Amp Section
AM MIXER Q301
AM OSCILLATOR Q305
AM I-F AMPLIFIER Q302
AM I-F AMPLIFIER Q303
CERAMIC CF301
AM I-F AMPLIFIER Q304
DETECTOR D302
RECTIFIER D303
METER CALIBRATION ADJ
AGC
To Audio Section

– Tuner Section –

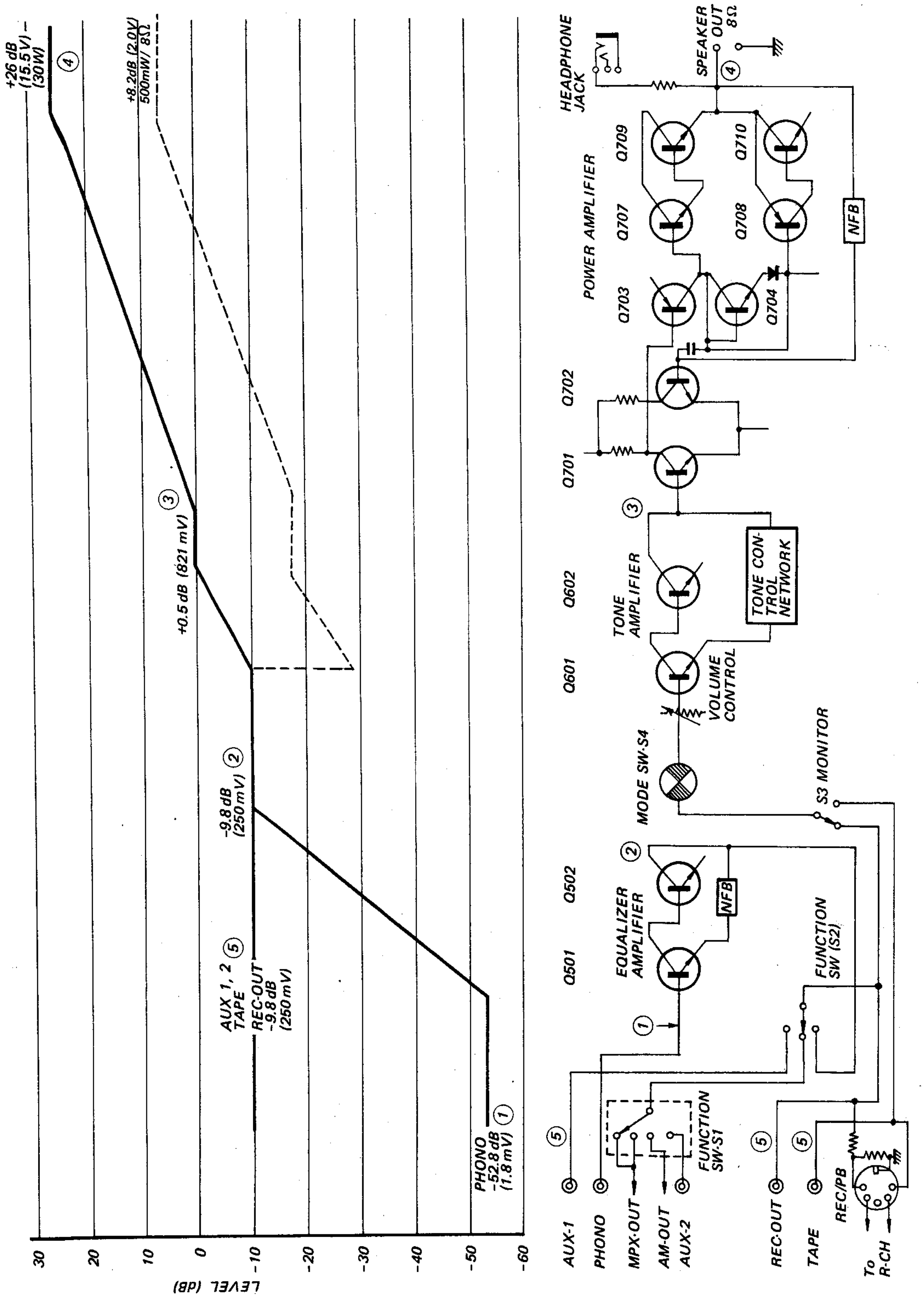
Note: Applicable Serial Numbers:
USA Model............810,401 and later
Canada Model ......700,301 and later
EP Model ....553,001 and later
UK Model ....600,001 and later
AEP Model............900,001 and later


Fm I-f Amp Section
FM I-F AMPLIFIER Q202
D201 D202
DIODE LIMITER
CERAMIC FILTER CF205, 206
CERAMIC FILTER CF203, 204
FM I-F AMPLIFIER Q203, 204
FM I-F AMPLIFIER Q201
DIODE LIMITER
D203 D204
CERAMIC FILTER CF201, 202
I-F AMPLIFIER Q208
FM I-F AMPLIFIER Q205
MUTING CIRCUIT
VOLTAGE DOUBLER D211, D212
DIODE LIMITER
D209 D210
DIODE LIMITER
D205 D206
MUTING SWITCH Q209, Q210
Fm Front-End
I-F PRE-AMPLIFIER Q103
FM AFC D101, D102
FM I-F AMPLIFIER Q206
FM MIXER Q101
FM OSCILLATOR Q102
FM DETECTOR D207, D208
MUTING SW
B⊕
S7
PASSIVE RF CIRCUIT
SCA TRAP L203, C220
MUTING SWITCH Q207
BALUN B1
MPX Decoder Section
To Audio Section
LPF
SEPARATION ADJ
PRE-AMPLIFIER Q404, 406
PRE-AMPLIFIER Q405, 407
DE-EMPHASIS SW
S10
S10
MULTIPLEX DEMODULATOR D405, 406 D407, 408
38 kHz AMPLIFIER Q402
STEREO LAMP SWITCH Q403
STEREO LAMP
FREQUENCY DOUBLER D401, D402
19 kHz AMPLIFIER Q401
TUNING METER
To Audio Section
DETECTOR D302
AM I-F AMPLIFIER Q304
RECTIFIER D301
A-m Cp/I-f Amp Section
AM I-F AMPLIFIER Q303
METER CALIBRATION ADJ
AM CERAMIC FILTER CFT301
AGC Q302
AM MIXER Q301
AM OSCILLATOR Q305

— Audio Amp Section —


Preamplifier Section
AUX-1
PHONO
MPX OUT
A-M OUT
AUX-2
REC OUT
TAPE
REC/PB
To R-CH
EQUALIZER AMPLIFIER Q501, 502
FUNCTION SW S2
FUNCTION SW
S1
MONITOR SW
S3
To R-CH
MODE SW S4
S5
LOUDNESS SW
ON
OFF
VOLUME CONTROL
LOUDNESS NETWORK
TONE AMPLIFIER Q601, 602
TREBLE CONTROL NETWORK
BASS CONTROL NETWORK
HIGH FILTER NETWORK
S6
HIGH FILTER SW
To Power Amplifier
R-CH (same as above)
Power Supply Section
To Preamplifier Section B ⊕
To Tuner Section B ⊕
-37 V
+37 V
-41 V
+41 V
RIPPLE FILTER Q711, Q761
REGULATOR Q801
BRIDGE RECTIFIER D801
HALF-WAVE RECTIFIER D802
POWER TRANS-FORMER
S9
POWER SW
AC
MAIN
REMOTE
S8½
SPEAKER SW
HEADPHONE
S8½
MAIN
REMOTE
Power Amplifier Section
From Preamplifier
PARAPHASE AMPLIFIER Q701, Q702
PRE DRIVER AMP Q703
DC BIAS SUPPLY Q704
THERMAL COMPENSA-TION D702
DRIVER Q707
DRIVER Q708
POWER AMPLIFIER Q709
POWER AMPLIFIER Q710
PROTECTION CIRCUIT Q705, Q706, D707, D708, D709, D710
AC, DC FEEDBACK
R-CH (same as above)

1-4. LEVEL DIAGRAM


LEVEL (dB)
30
20
10
0
-10
-20
-30
-40
-50
-60
+26 dB (15.5V) (30W) ④
+8.2dB (2.0V) 500mW/ 8Ω
+0.5 dB (821 mV) ③
-9.8 dB (250 mV) ②
AUX 1, 2 TAPE ⑤
REC-OUT -9.8 dB (250 mV)
PHONO -52.8 dB (1.8 mV) ①
AUX-1
PHONO
MPX-OUT
AM-OUT
AUX-2
FUNCTION SW-S1
REC-OUT
TAPE
REC/PB
To R-CH
⑤
①
Q501
Q502
EQUALIZER AMPLIFIER
NFB
②
FUNCTION SW (S2)
S3 MONITOR
MODE SW-S4
VOLUME CONTROL
Q601
Q602
TONE AMPLIFIER
TONE CONTROL NETWORK
③
Q701
Q702
Q703
Q704
Q707
Q708
Q709
Q710
POWER AMPLIFIER
NFB
HEADPHONE JACK
SPEAKER OUT 8Ω
④

Note: Signal voltages are measured with an ac VTVM and expressed in dB referred to 0.775V, 1 kHz.

SECTION 2

DISASSEMBLY AND REPLACEMENT

WARNING

Unplug the ac power cord before starting any disassembly or replacement procedures.

2-1. TOOLS REQUIRED

The following tools are required to perform disassembly and replacement procedures on the STR-6055.

1. Screwdriver, Phillips-head
2. Screwdriver, 1/8" blade (3 mm)
3. Pliers, long-nose
4. Diagonal cutters
5. Wrench, adjustable
6. Tweezers
7. Electric drill
8. Drill bits
9. Prick punch
10. Hammer, ball-peen
11. Soldering iron, 40 ~ 150 watts
12. Solder, rosin core
13. Cement solvent
14. Contact cement
15. Thermal compound or silicone grease

2-2. HARDWARE IDENTIFICATION GUIDE

The following chart will help you to decipher the hardware codes given in this service manual.

Note: All screws in the STR-6055 are manufactured to the specifications of the International Organization for Standardization (ISO). This means that the new and old screws are not interchangeable because ISO screws have a different number of threads per mm compared to the old ones. The ISO screws have an identification mark on their heads as shown in Fig. 2-1.

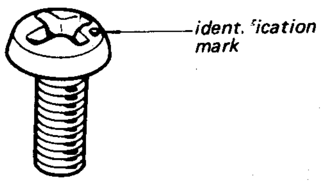


Fig. 2-1. ISO screw

— Hardware Nomenclature —

P – Pan Head Screw .... ⊕

PS – Pan Head Screw with Spring Washer .... ⊕

K – Flat Countersunk Head Screw ... ⊕

B – Binding Head Screw .... ⊕

RK – Oval Countersunk Head Screw .. ⊕

T – Truss Head Screw .... ⊕

R – Round Head Screw .... ⊕

F – Flat Fillister Head Screw ...... ⊖

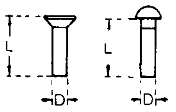
SC – Set Screw .... ⊖

E – Retaining Ring (E Washer).........

W – Washer
SW – Spring Washer
LW – Lock Washer
N – Nut

– Example –

Type of Slot
⊕ P 3x10
Length in mm (L)
Diameter in mm (D)
Type of Head



2-3. TOP COVER AND BOTTOM PLATE REMOVAL

1. Remove the two machine screws at each side of the receiver, and lift off the top cover.
2. Remove the six self-tapping screws (⊕B 3x6) at the bottom of the receiver and pull the bottom plate in the direction indicated by the arrow in Fig. 2-2.

2-4. FRONT PANEL REMOVAL

1. Remove the top cover as described in Procedure 2-3.
2. Pull all the knobs off.

3. Remove the two screws (⊕B 3x6) and two hex-nuts securing the front panel to the front subchassis as shown in Fig. 2-3. Place a piece of cardboard or cloth between the wrench and front panel to avoid marring the panel as shown in Fig. 2-4. Now the front panel is free for servicing.

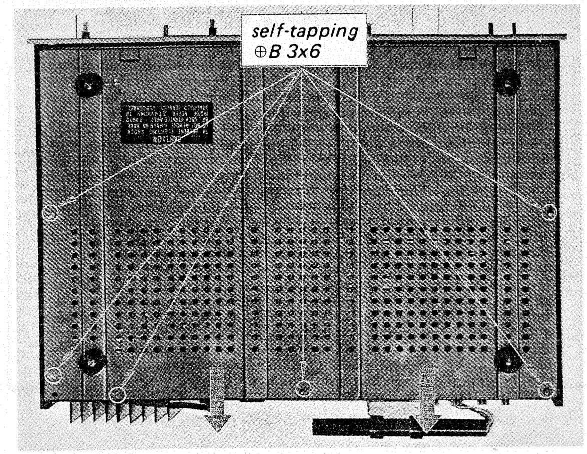

self-tapping
⊕B 3x6

Fig. 2-2. Bottom plate removal

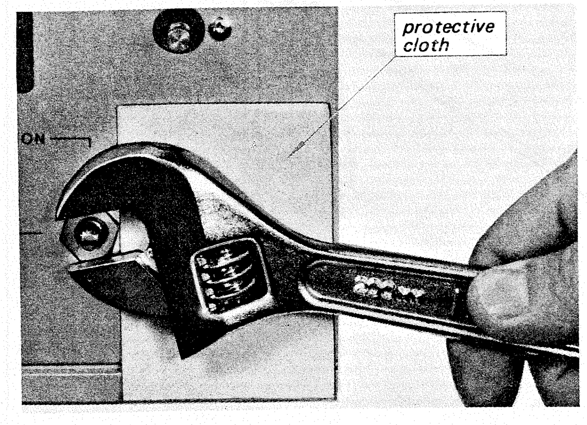

protective cloth
ON

Fig. 2-4. Hex nut removal

2-5. DIAL CORD RESTRINGING

Preparation

1. Remove the top cover as described in Procedure 2-3.
2. Cut a 1,500 mm (59") length of dial cord.
3. Tie the end of the cord to a spring as shown in Fig. 2-5.
4. Rotate the tuning-capacitor drive drum fully clockwise (minimum capacitance position).

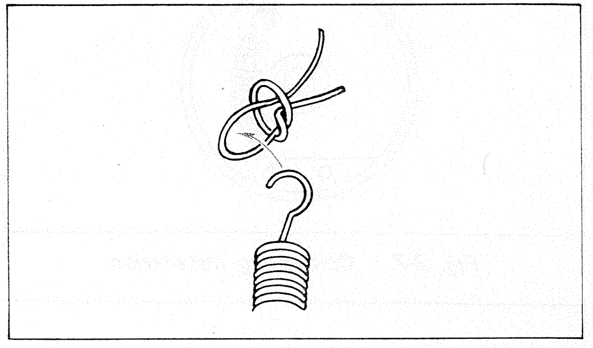


Fig. 2-5. Tying square knot to the coil spring

Procedure

While referring to Fig. 2-6, proceed as follows:

1. Hook the spring to one hole of the drive drum as shown in Fig. 2-7.
2. Run the cord through the slot in the rim of the drum and wrap a half clockwise turn in the inner groove.
3. Run the cord over pulley "A", and then wrap two counterclockwise turns around the tuning shaft.

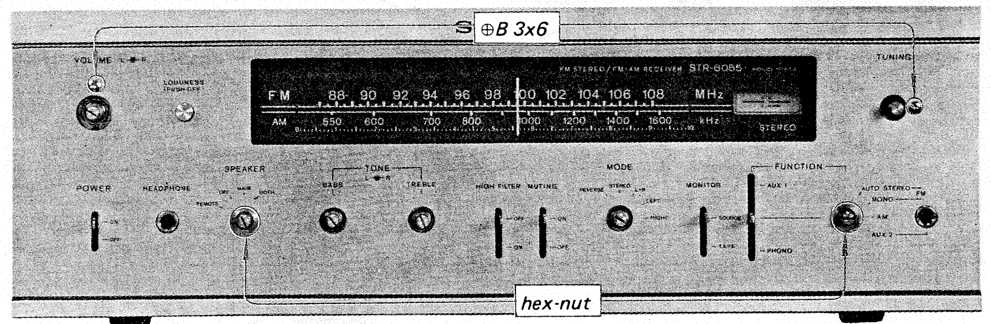

⊕B 3x6
hex-nut
VOLUME
LOUDNESS
TUNING
FM STEREO / FM-AM RECEIVER STR-6055
FM 88 90 92 94 96 98 100 102 104 106 108 MHz
AM 550 600 700 800 1000 1200 1400 1600 kHz
STEREO
POWER
HEADPHONE
SPEAKER
TONE
BASS
TREBLE
HIGH FILTER
MUTING
MODE
MONITOR
FUNCTION
AUX 1
AUTO STEREO
MONO
FM
AM
AUX 2
PHONO

Fig. 2-3. Front panel removal

X

4. Run the cord over pulleys "B", "C" and "D", then wrap two clockwise turns around the drum from outer groove to inner groove as shown in Fig. 2-8.
5. Pass the doubled end of the cord through the eyelet, then hook it to the spring as shown in Fig. 2-9.

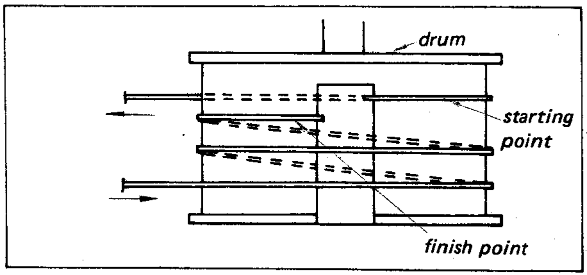

drum
starting point
finish point

Fig. 2-8. Wrapping the dial cord

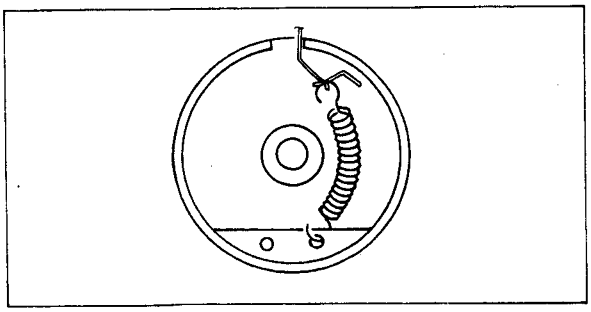


Fig. 2-7. Coil spring installation

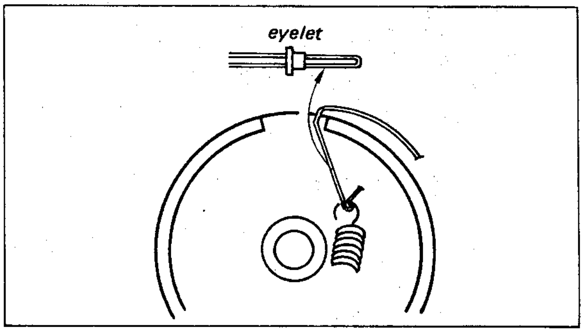


Fig. 2-9. Finishing dial cord stringing

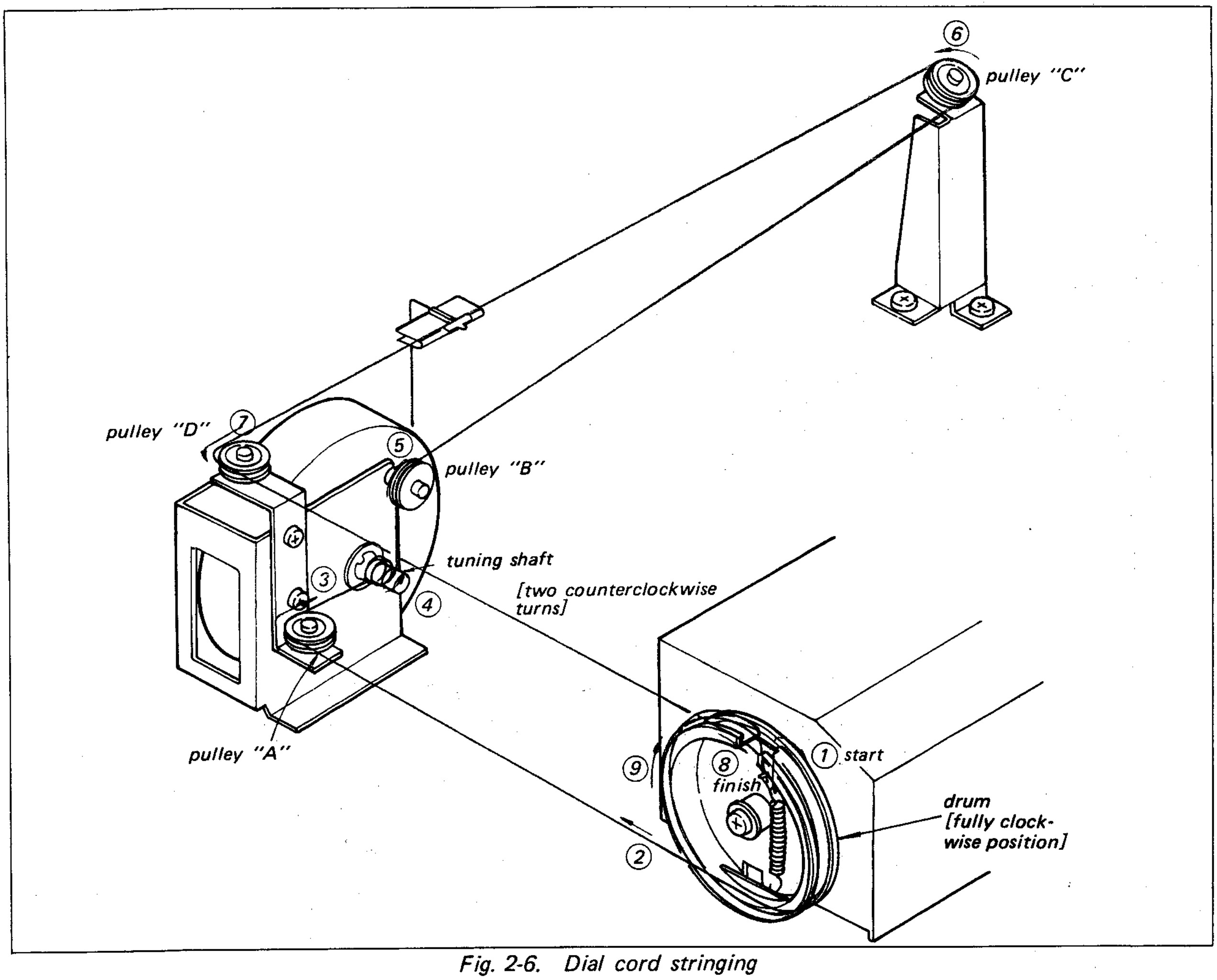

⑥
pulley "C"
pulley "D"
⑦
⑤
pulley "B"
tuning shaft
[two counterclockwise turns]
③
④
pulley "A"
⑨
⑧
finish
① start
drum
[fully clockwise position]
②

Fig. 2-6. Dial cord stringing

6. Tighten the cord, then squeeze the eyelet so that the spring is under tension. Make a knot at the cord end to keep it from slipping out of the eyelet.
7. After completing the dial-cord stringing, make sure that the tuning system works properly. Apply a drop of contact cement to the finish point.
8. Perform the mechanical dial calibration by following the procedure 2-6.

2-6. MECHANICAL DIAL CALIBRATION

Note: This is required after replacing the dial cord, dial scale or front-end assembly.

1. Put the dial pointer on the cord as shown in Fig. 2-10 and move it to a position where the pointer coincides with the left gap on the dial scale as shown in Fig. 2-11, when the tuning capacitor is set to the maximum capacitance.
2. Apply a drop of contact cement to the tab of the dial pointer.

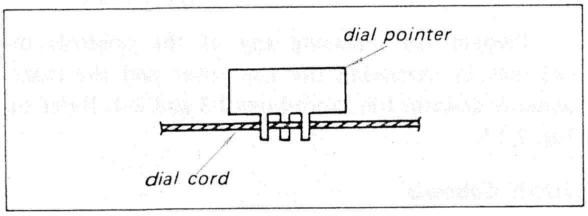


Fig. 2-10. Dial pointer installation

2-7. DIAL SCALE REPLACEMENT

1. Remove the top cover as described in Procedure 2-3.
2. Remove the front panel as described in Procedure 2-4.
3. Remove the two screws (⊕ P 2.6x4) securing the dial-scale holder to the front subchassis as shown in Fig. 2-12.
4. Remove the defective dial scale, and then install the replacement scale.

2-8. PILOT LAMP REPLACEMENT

Prepare for replacement any of the pilot lamps by removing the top cover as described in Procedure 2-3.

Meter Lamp

1. Straighten the tab of the meter-lamp holder to permit the removal of the meter-lamp socket.
2. Pull out the meter-lamp socket, and then unscrew the lamp from the socket and install the new lamp.

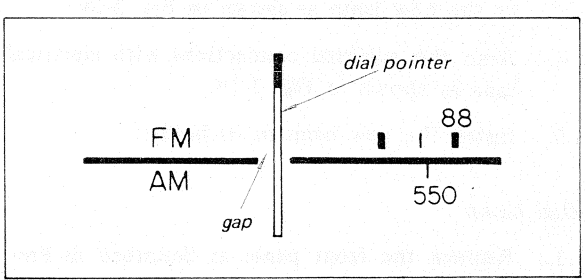


Fig. 2-11. Mechanical dial calibration

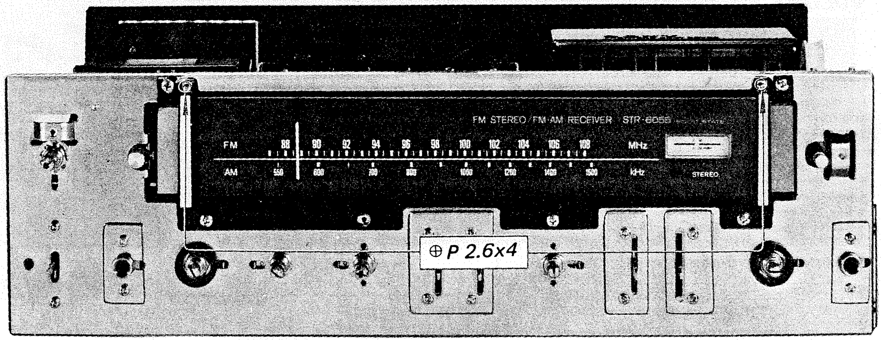


Fig. 2-12. Dial scale removal

Stereo Lamp

1. Remove the two self-tapping screws (⊕B 3x6) securing the meter holder to the chassis as shown in Fig. 2-13.

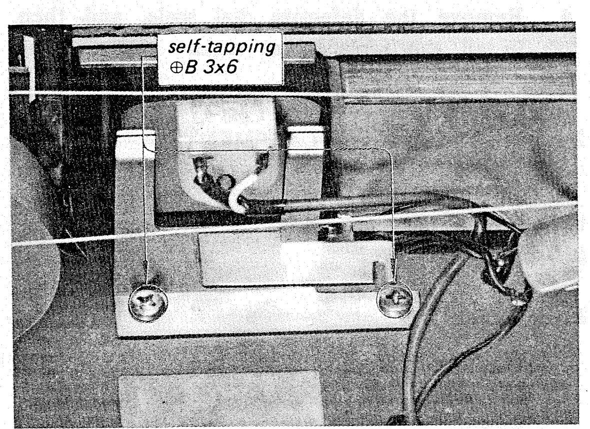

self-tapping
⊕B 3x6

Fig. 2-13. Meter holder and stereo lamp removal

2. Pull the lamp from its holder with tweezers.
3. Cut the lamp leads and solder the lead wires to the new lamp as shown in Fig. 2-14.
4. Wrap the soldered connections with electrical tape as shown in Fig. 2-14.
5. Install the new lamp in its holder.

Dial Lamp

1. Remove the front panel as described in Procedure 2-4.
2. Pry out the fiber lamp shade, and then remove the lamp.

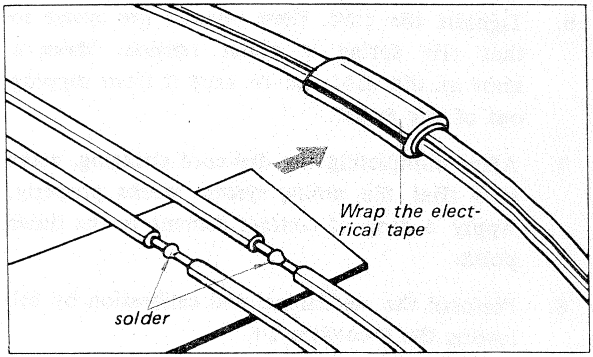

Wrap the electrical tape
solder

Fig. 2-14. Stereo lamp replacement

2-9. TUNING METER REPLACEMENT

1. Remove the top cover as described in Procedure 2-3.
2. Unsolder the leads from the defective meter.
3. Remove the two self-tapping screws (⊕B 3x6) securing the meter holder to the chassis as shown in Fig. 2-13.
4. Remove the meter, and install a new one.

2-10. CONTROL AND SWITCH REPLACEMENT

Prepare for replacing any of the controls or switches by removing the top cover and the front panel as described in Procedures 2-3 and 2-4. Refer to Fig. 2-15.

TONE Controls

1. Apply a drop of cement solvent to the ring spacer on the TREBLE control. Wait a few seconds for the cement to dissolve, and pry out the spacer with a screwdriver.

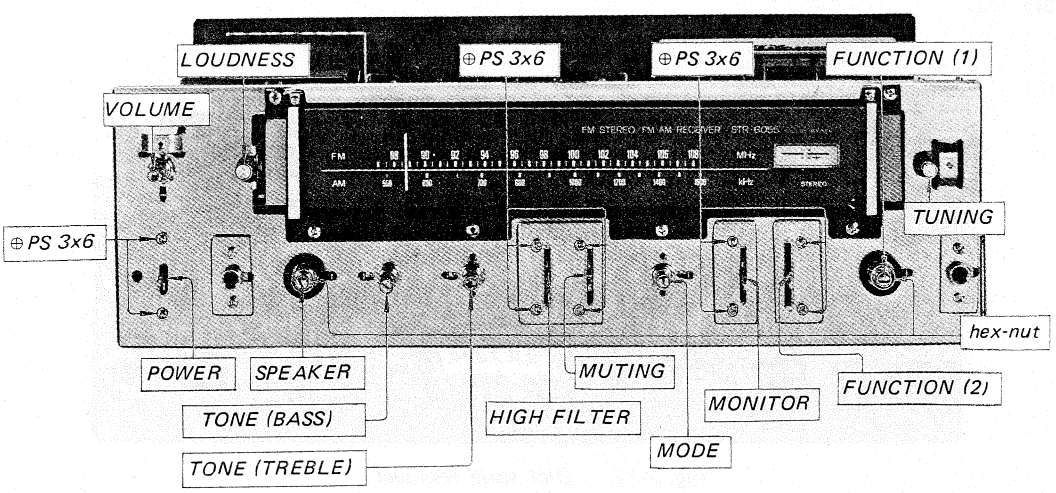

LOUDNESS
⊕PS 3x6
⊕PS 3x6
FUNCTION (1)
VOLUME
⊕PS 3x6
TUNING
hex-nut
POWER
SPEAKER
MUTING
FUNCTION (2)
TONE (BASS)
HIGH FILTER
MONITOR
MODE
TONE (TREBLE)

Fig. 2-15. Control and switch replacement

2. Remove the hex nuts that secure the BASS and TREBLE controls to the front-subchassis.
3. Carefully remove them along with the tone-control circuit board.
4. Cut each lug of the defective control on the board to remove the part.
5. Unsolder and remove the clipped lugs, and clean out the holes of the circuit board.
6. Install the replacement control.

POWER, HIGH FILTER, MUTING, MONITOR, FUNCTION (2) Switches

1. Remove the two screws (⊕PS 3x6) securing switches to the front subchassis as shown in Fig. 2-15.
2. Unsolder the lead wires from the defective switch, and then install the replacement switch.

SPEAKER, MODE, FUNCTION (1) Switches

1. Apply a drop of cement solvent to the ring spacer on the switches. Wait a few seconds for the cement to dissolve, and pry out the spacer with a screwdriver.
2. Remove the hex nuts that secure the switches to the front-subchassis as shown in Fig. 2-15.
3. Unsolder the lead wires from the defective switch, and then install the replacement switch.

LOUDNESS Switch

1. Fasten the dial cord to the drum with cellophane tape.
2. Remove the two self-tapping screws (⊕ B 3x6) (■) or two screws (⊕ B 3x6) (●) securing the dial pulley bracket to the chassis as shown in Fig. 2-16.

   Note: ■ (AEP and UK Model)
   ● (USA, Canada and EP Model)

3. Put the bracket aside, and then remove the screw (⊕ B 2.6x4) securing the loudness switch to the front subchassis.
4. Remove it along with the loudness control board, and then install the replacement switch or replacement mounted circuit board including loudness switch (Part No. X-48030-23-0).

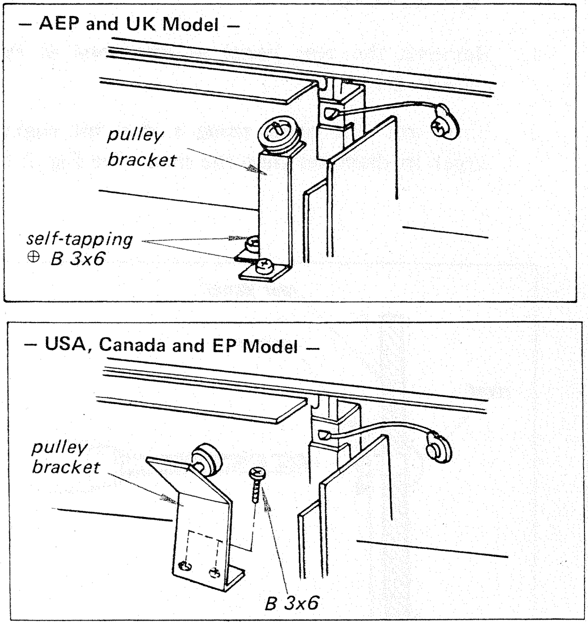

– AEP and UK Model –
pulley bracket
self-tapping ⊕ B 3x6
– USA, Canada and EP Model –
pulley bracket
B 3x6

Fig. 2-16. Dial pulley bracket removal

2-11. REAR PANEL REMOVAL

1. Remove the top cover and bottom plate as described in Procedure 2-3.

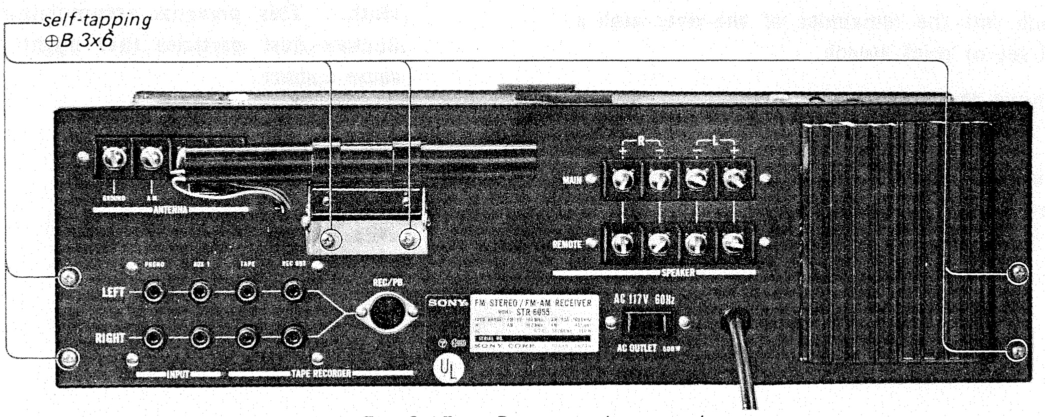

self-tapping ⊕B 3x6
ANTENNA
MAIN
REMOTE
SPEAKER
PHONO
AUX 1
TAPE
REC OUT
LEFT
RIGHT
REC/PB
INPUT
TAPE RECORDER
SONY
FM STEREO / FM-AM RECEIVER
STR-6055
AC 117V 60Hz
AC OUTLET

Fig. 2-17. Rear panel removal

2. Unsolder the lead wire connecting between ground terminal and chassis.
3. Unsolder the coaxial cable from fm antenna terminal.
4. Remove the six self-tapping screws (⊕B 3x6), two of them secure the bar antenna holder to the chassis along with rear panel and others secure the rear panel to the chassis as shown in Fig. 2-17. This frees the rear panel.

2-12. REPLACEMENT OF COMPONENTS SECURED TO THE REAR PANEL BY RIVETS

1. Remove the rear panel as described in Procedure 2-11.
2. Bore out the rivets using a drill bit slightly larger in diameter than the rivet. See Fig. 2-18.

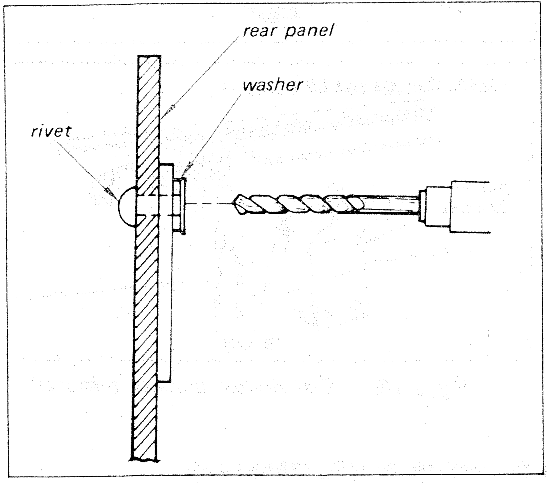


Fig. 2-18. Rivet replacement

3. Punch out the remainder of the rivet with a nail set or prick punch.
4. Remove the defective component, and install the new one.
5. Secure the new component with a suitable screw and nut, or a repair rivet screw (Part No. 3-701-402-00).

2-13. POWER TRANSISTOR REPLACEMENT

1. Remove the top cover and bottom plate as described in Procedure 2-3.
2. Remove the four self-tapping screws (⊕B 3x8) securing the heat sink to the chassis as shown in Fig. 2-19.

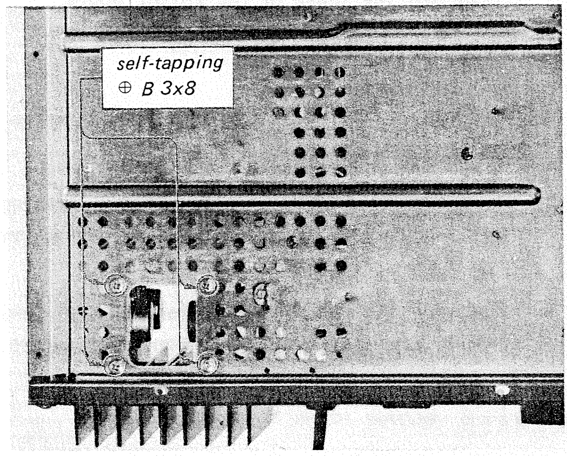
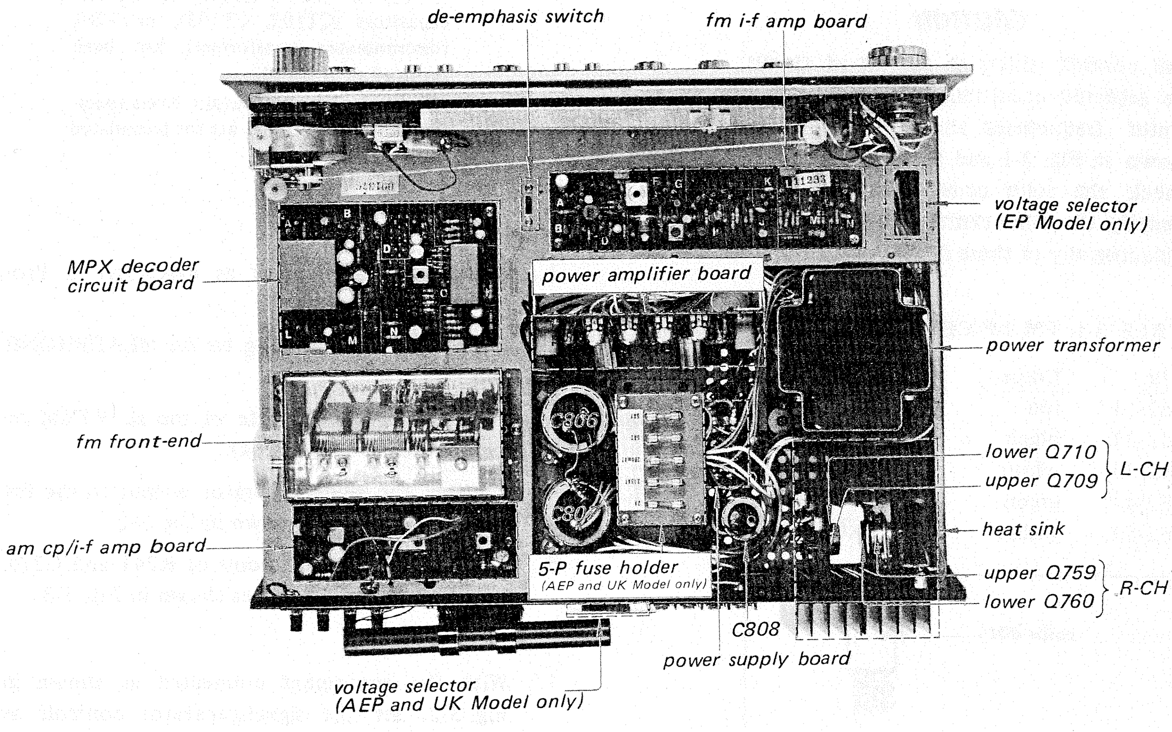
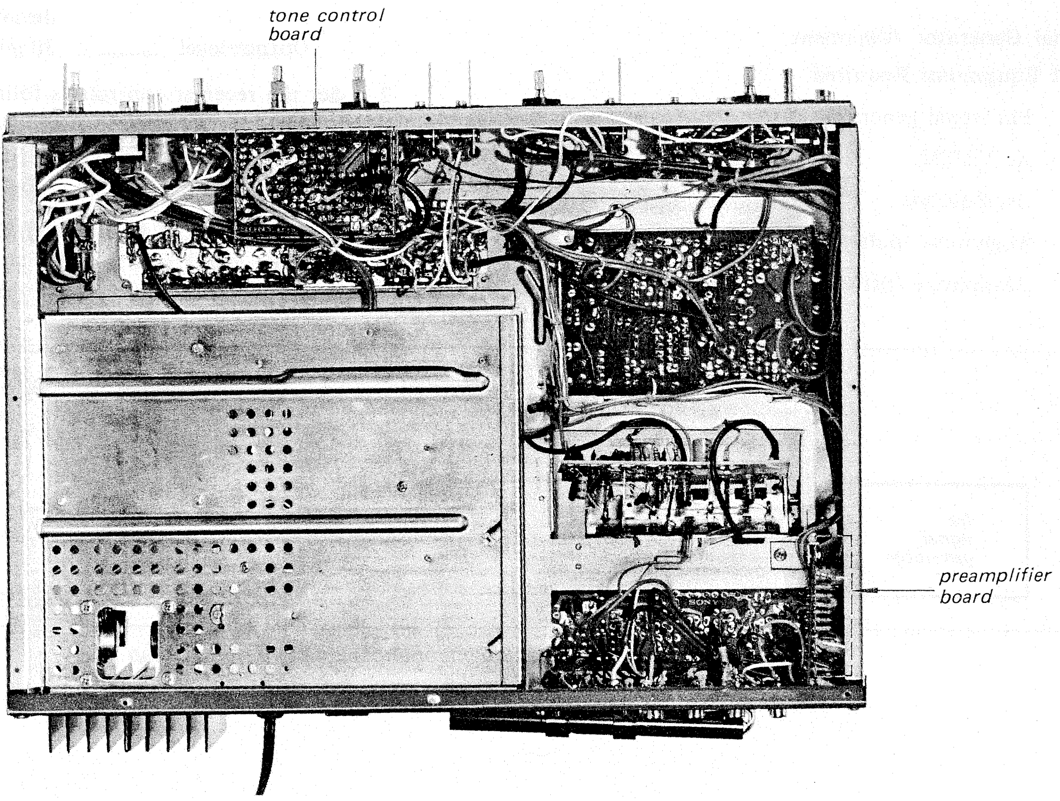


Fig. 2-19. Heat sink removal

3. Cut the emitter and base leads of the defective power transistor with a diagonal cutter. This prevents damage to the mica insulator when removing the defective power transistor.
4. Carefully draw back the heat sink, and then remove the two screws (⊕B 3x12) and nuts securing the power transistor to the heat sink.
5. When replacing the power transistor, apply a coating of a thermal compound or a heat-transferring grease to both sides of the mica insulator. Any excess compound or grease squeezed out when the mounting screws are tightened should be wiped off with a clean cloth. This prevents accumulation of conductive dust particles that might eventually cause a short.

2-14. CHASSIS LAYOUT


de-emphasis switch
fm i-f amp board
voltage selector
(EP Model only)
MPX decoder
circuit board
power amplifier board
power transformer
fm front-end
lower Q710
upper Q709
L-CH
heat sink
am cp/i-f amp board
5-P fuse holder
(AEP and UK Model only)
upper Q759
lower Q760
R-CH
C808
C806
power supply board
voltage selector
(AEP and UK Model only)


tone control
board
preamplifier
board

SECTION 3
ALIGNMENT AND ADJUSTMENT

3-1. FM I-F STRIP ALIGNMENT

CAUTION

The ceramic filters in the fm i-f circuit are selected according to their specified center frequencies and color coded as shown in Fig. 3-1 and listed in Table 3-1. Check the color code of the filters to identify the same center frequency when replacing any of these filters.

TABLE 3-1. FM I-F CERAMIC FILTERS

Part No.	Color	Specified Center Freq.
1-403-562-11	red	10.70 MHz
1-403-562-21	black	10.66 MHz
1-403-562-31	white	10.74 MHz
1-403-562-41	green	10.62 MHz
1-403-562-51	yellow	10.78 MHz

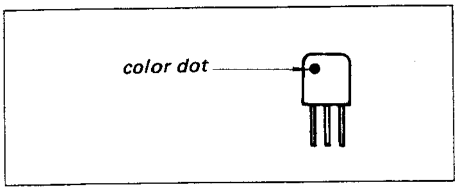


Fig. 3-1. Fm i-f ceramic filter

Signal Generator Alignment

Test Equipment Required

1. Fm signal generator
2. Ac VTVM
3. Oscilloscope
4. Alignment tools
5. Headphone (8Ω)

Note: This alignment is needed only after IFT101 in the front-end, rf trimmer capacitors (CT102, CT103), or T201 (discriminator transformer) has been replaced or repaired.

All signal generator output levels specified in the fm section are for terminated output.

Preparation

1. Remove the top cover as described in Procedure 2-3 on page 16.
2. Insert a headphone plug to the HEADPHONE jack.
3. Connect the input cable of the ac VTVM to the REC OUT jack (J504).
4. Connect the signal-generator output to the fm antenna terminal as shown in Fig. 3-2.
5. Short the connection point of R241 and C215 (AFC circuit) to ground as shown in Fig. 3-3.

Procedure

1. With the equipment connected as shown in Fig. 3-2, set the signal-generator controls as follows:
   Carrier frequency......... 98 MHz
   Modulation .... Fm, 400 Hz, 75 kHz deviation (100%)
   Output level .... 30 μV (30 dB)
2. Set the receiver controls as follows:
   FUNCTION switch .... FM MONO
   MODE switch.................. STEREO
   VOLUME control .... Minimum
3. Turn the core of transformer IFT101 or T201 (bottom core) (see Fig. 3-3 or Fig. 3-5) with the alignment tool to obtain maximum output.

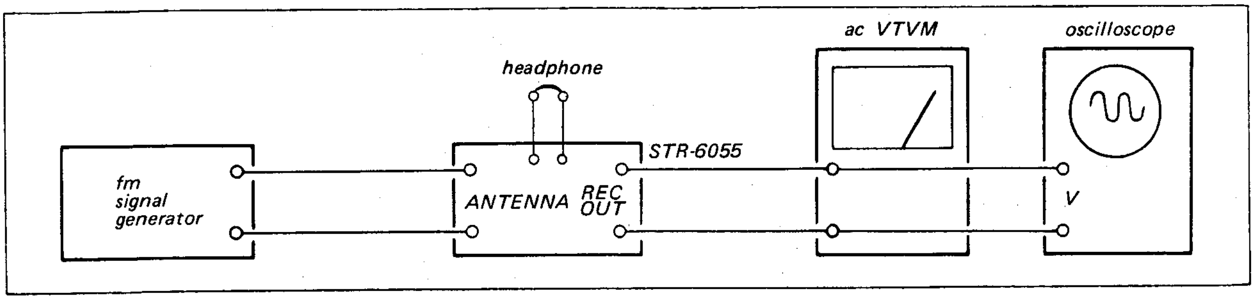


Fig. 3-2. Fm i-f, muting and front-end alignment test setup

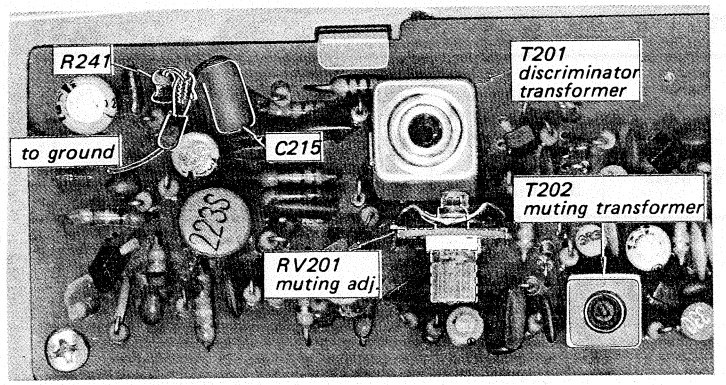


Fig. 3-3. Interruption of afc circuit and parts location

3-2. FM DISCRIMINATOR ALIGNMENT

Note: There are two or three methods of discriminator alignment, but only the simplified method using the receiver's TUNING meter is described here.

Test Equipment Required

1. Oscilloscope
2. Alignment tools
3. Headphone (8Ω)

Preparation

1. Remove the top cover as described in Procedure 2-3 on page 16.
2. Connect the input cable of the oscilloscope to REC OUT jack (J504) as shown in Fig. 3-4.
3. Short the connection point of R241 and C215 (AFC circuit) to ground as shown in Fig. 3-3.
4. Insert a headphone plug to the HEADPHONE jack.

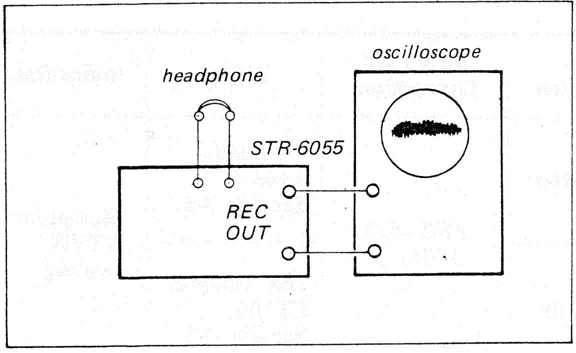


Fig. 3-4. Discriminator alignment test setup

Procedure

1. With the equipment connected as shown in Fig. 3-2, set the receiver controls as follows:
   FUNCTION switch .... FM MONO
   MODE switch .... STEREO
   No signal should be received.
2. Adjust the controls of the oscilloscope to provide a visible indication of noise. Always watch the oscilloscope to confirm that the tuner is not receiving any off-the-air signals.
3. Turn the top core (secondary side) of discriminator transformer T201 (see Fig. 3-3) with a hex-head alignment tool to obtain a null-point reading on the TUNING meter. If the discriminator transformer (T201) is not aligned correctly, some deviation on the TUNING meter will be observed.

   Note: Turn the core carefully and slowly. At both extreme positions of the top core, a null point will be observed. The real null point should be obtained in the middle of the core thread length.
4. Repeat the above mentioned steps and fm i-f strip alignment two or three times.

3-3. MUTING ADJUSTMENT

Note: Two methods of muting adjustment are available, signal generator adjustment and adjustment by using an off-the-air signal. You can use either of them.

Signal Generator Adjustment

Test Equipment Required

1. Fm signal generator
2. Ac VTVM or oscilloscope
3. Alignment tool

Preparation

1. Remove the top cover as described in Procedure 2-3 on page 16.
2. Turn RV201 (see Fig. 3-3) fully clockwise on the fm i-f amp board.
3. Short the connection point of R241 and C215 (AFC circuit) to ground as shown in Fig. 3-3.

TABLE 3-2 MUTING ADJUSTMENT

Coupling Between Receiver and SG	SG Frequency and Output Level	Dial Indication	Adjust	Remarks
Direct	98 MHz 400 Hz, 30% Mod.	98 MHz	T202 See Fig. 3-3	Turn the core of T202 to obtain proper muting operation.

Procedure

1. With the equipment connected as shown in Fig. 3-2, set the receiver controls as follows:

   FUNCTION switch .... FM MONO
   MODE switch .... STEREO
   MUTING switch .... ON

2. Follow the procedure given in Table 3-2. Note that the muting circuit should begin to operate at the symmetrical deflection point of TUNING meter when detuning the tuner to higher or lower than the reference carrier frequency.

Off-the-Air Signal Adjustment

Accurate muting circuit adjustment can also be performed by utilizing off-the-air local fm signals instead of the fm signal generator.

Note that a weak signal is best for this purpose.

3-4. FM FREQUENCY COVERAGE ALIGNMENT

CAUTION

Never attempt alignment of the front-end section except for the frequency-coverage and dial-calibration adjustments. The front-end section of the tuner has been carefully adjusted at the factory, so very little adjustment is necessary in the field. Alignment need not be performed when the front-end FET is replaced since changes in FET parameters have little effect upon tuning. If an rf-stage adjustment is required, ask your nearest SONY Service Station to send your unit to the Factory Service Center for a complete front-end alignment.

Exercise caution when returning the faulty unit so that it will not be damaged during transit. The warranty will not cover damage incurrent in transit to the Factory Service Center.

Note: Before starting this alignment, the discriminator-transformer alignment should be performed.

Signal Generator Alignment

Test Equipment Required

1. Fm signal generator
2. Ac VTVM
3. Alignment tools

TABLE 3-3 FM FREQUENCY COVERAGE ALIGNMENT

Step	Coupling Between Receiver and SG	SG Frequency and Output Level	Dial Indication	Ac VTVM Connection	Adjust	Indication
1	Direct	87.5 MHz 400 Hz 100% Mod. as low as possible	87.5 MHz	REC OUT (J504)	OSC coil L104 See Fig. 3-5	Maximum VTVM reading
2		108 MHz 400 Hz 100% Mod. as low as possible	108 MHz		OSC trimmer CT104 See Fig. 3-5	

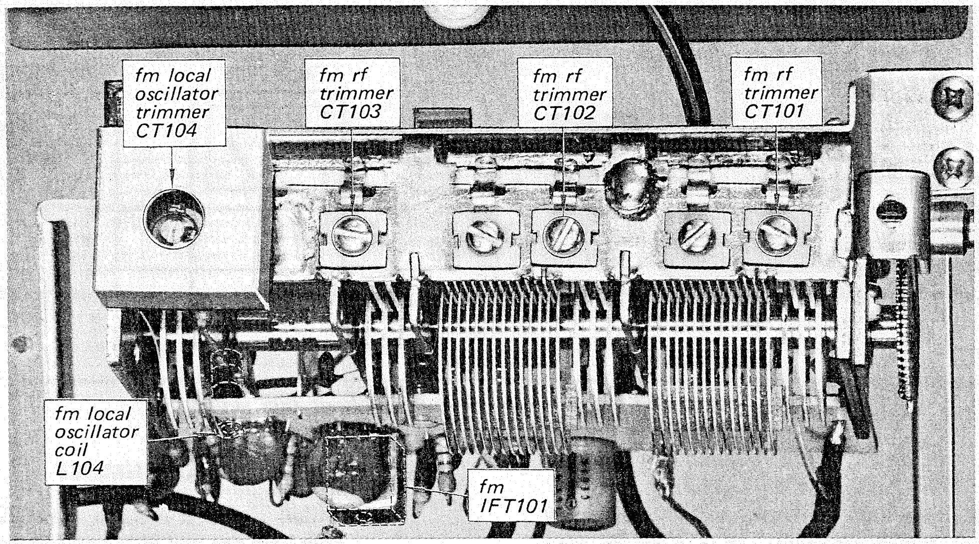


Fig. 3-5. Adjustment parts location

Preparation

1. Remove the top cover as described in Procedure 2-3 on page 16.
2. Connect the equipment as shown in Fig. 3-2.
3. Set the receiver controls as follows:
   FUNCTION switch .... FM MONO
   MODE switch .... STEREO
4. Short the connection point of R241 and C215 (AFC circuit) to ground as shown in Fig. 3-3.

Procedure

Follow the procedures given in Table 3-3 when performing this alignment with an fm signal generator. Be sure that the dial is mechanically calibrated as described in Procedure 2-6 on page 19.

Off-the-Air Signal Alignment

An accurate frequency-coverage alignment can also be performed by utilizing off-the-air local fm signals. However, before performing the following procedure, be sure that the dial pointer is correctly positioned as described in Procedure 2-6 on page 19.

Test Equipment Required

1. Alignment tools

Procedure

1. Short the connection point of R241 and C215 (AFC circuit) to ground as shown in Fig. 3-3.
2. Tune the receiver to the lowest frequency station.
3. Check the dial scale for a calibration accuracy of ±200 kHz from the carrier frequency of the station. If the dial-accuracy deviation exceeds this limit, turn the local-oscillator coil L104 (see Fig. 3-5) slightly until optimum dial calibrations is obtained.
4. Tune the receiver to the highest-frequency station in your locality. If the dial-calibration error is excessive, adjust local-oscillator trimmer CT104 (see Fig. 3-5) to obtain maximum calibration accuracy.
5. Repeat steps 3 and 4.

3-5. FM STEREO SEPARATION ADJUSTMENT

Test Equipment Required

1. Fm stereo signal generator
2. Ac VTVM
3. Oscilloscope

Preparation

1. Remove the top cover as described in Procedure 2-3 on page 16.
2. Connect the test equipment as shown in Fig. 3-6, then set the fm stereo signal generator controls as follows:
   Carrier frequency .... 98 MHz
   Output level .... 1,000 μV (60 dB)
   Mode .... STEREO
   Audio (400 Hz) Mod........ 67.5 kHz (90%)*
   Pilot (19 kHz) Mod .... 7.5 kHz (10%)

***Note:** 75 kHz (100%) if the metering indicates total modulation (audio-pilot).

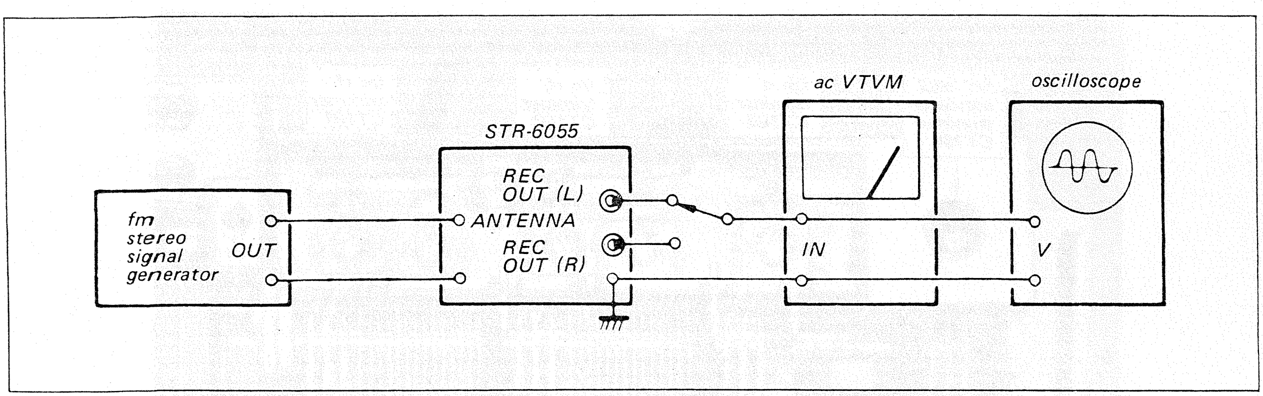


Fig. 3-6. Fm stereo separation adjustment test setup

Procedure

1. Precisely tune the set to the carrier frequency of stereo signal generator, then turn the top core of switching transformer T401 (see Fig. 3-7) to obtain maximum output at the left channel. Note that this adjustment has a close relationship with stereo distortion.
2. Record the output level of the left channel when the stereo signal generator input selector is set to the left channel.
3. Switch the stereo signal generator input selector to the right channel and read the residual signal level in the left channel.
4. The output-level to residual-level ratio represents the separation. Adjust separation adj. control RV401 (see Fig. 3-7) for minimum residual level. Check the right channel for separation. Usually, about an 8 to 9 dB difference in channel separation exists. Readjust RV401 for minimum difference between left- and right-channel separation. While doing this, remember that the output level also changes according to the setting of RV401.

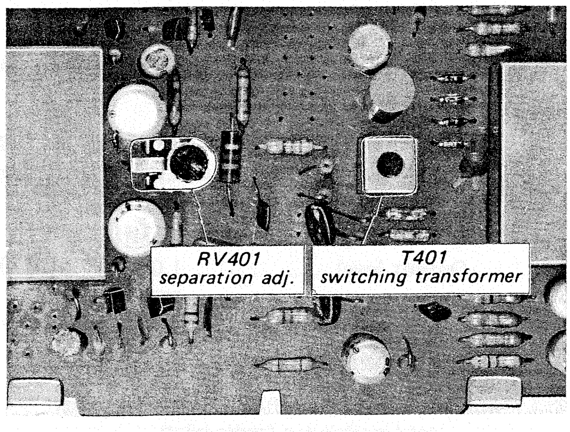


Fig. 3-7. Adjustment parts location

3-6. A-M I-F STRIP ALIGNMENT

Note: No adjustment is required in the field even if after replacing any of i-f transformers (CFT301 or IFT301) for the sets with serial numbers of
810,401 and later (USA Model)
700,301 and later (Canada Model)
553,001 and later (EP Model)
600,001 and later (UK Model)
900,001 and later (AEP Model).
Following procedures should be applied for the sets with serial numbers of
800,001 to 180,400 (USA Model)
700,001 to 700,300 (Canada Model)
550,001 to 553,000 (EP Model).

Preparation

Remove the top cover as described in Procedure 2-3 on page 16. Then set the receiver FUNCTION switch to AM.

Note: To perform this alignment, the local oscillator should be killed. To do this, shunt the local oscillator capacitor with a 0.02μF capacitor as shown in Fig. 3-9.

Sweep Generator Alignment

Test Equipment Required

1. Sweep generator, 455 kHz
2. Oscilloscope
3. Alignment tools

Procedure

1. Connect the sweep generator output directly to the a-m antenna terminal.
2. Connect the input cable of the oscilloscope to R321 (see Fig. 3-9) and ground on the a-m cp/i-f amp board with alligator clips as shown in Fig. 3-9.
3. Set the sweep generator controls as follows:
   Center frequency .... 455 kHz
   Sweep width .... 25 kHz
   Output .... as low as possible

4. With the equipment connected as shown in Fig. 3-10, adjust the oscilloscope controls and generator output to provide a visible indication.
5. Turn the top core of IFT301 (see Fig. 3-9) to obtain a maximum and symmetrical response as shown in Fig. 3-8.

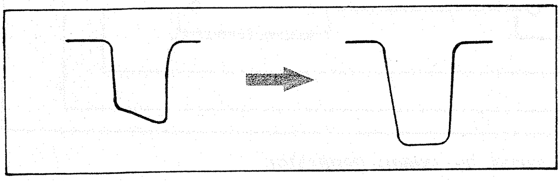


Fig. 3-8. A-m i-f strip alignment by sweep generator

Rf Signal Generator Alignment

Test Equipment Required

1. Signal generator, 455 kHz, a-m modulation
2. Oscilloscope or VTVM
3. Alignment tools

Procedure

1. Set the rf signal generator controls as follows:
   Modulation .... INTERNAL
   Frequency .... 455 kHz
   OUTPUT level 1,000μV
2. Connect the rf signal-generator output to a-m antenna terminal.
3. With the equipment connected as shown in Fig. 3-11, turn the top core of IFT301 (see Fig. 3-9) to obtain maximum output.

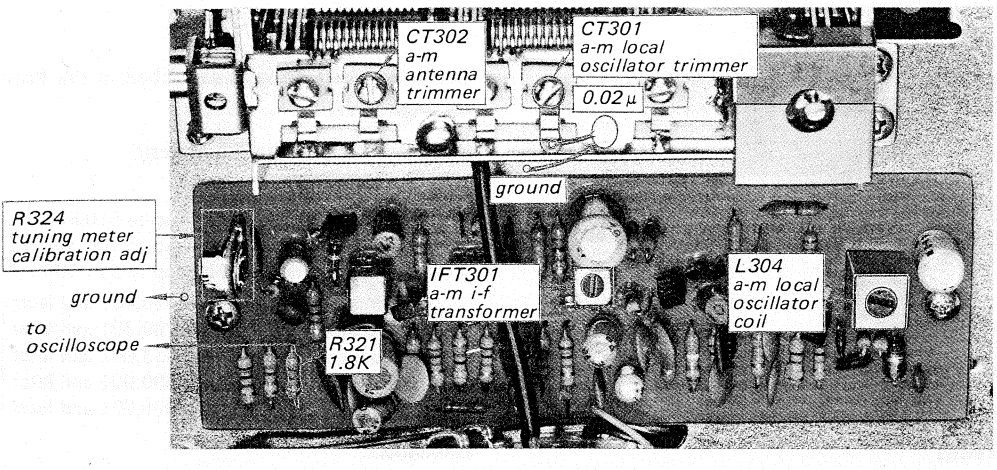

CT302
a-m antenna trimmer
CT301
a-m local oscillator trimmer
0.02μ
ground
R324
tuning meter calibration adj
ground
to oscilloscope
IFT301
a-m i-f transformer
R321
1.8K
L304
a-m local oscillator coil

Fig. 3-9. Disabling the a-m local oscillator, a-m detector output connection and adjustment parts location

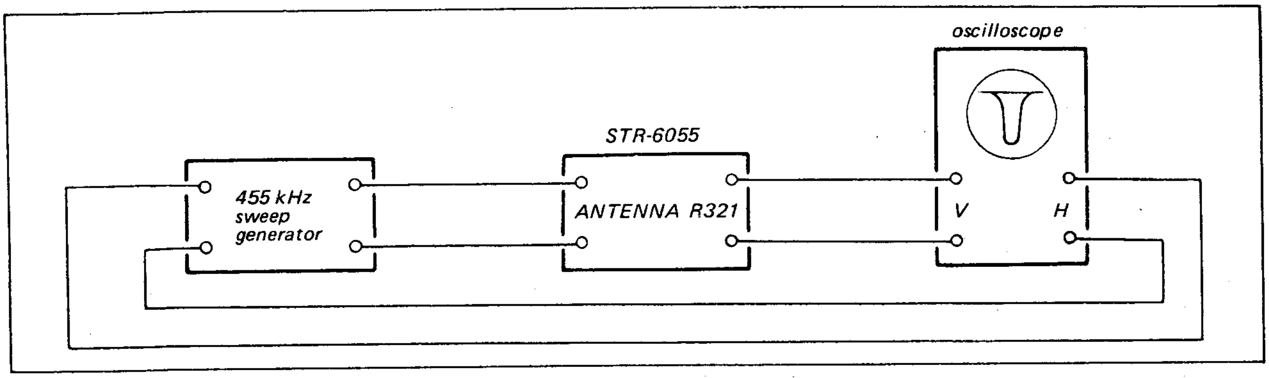


Fig. 3-10. A-m i-f strip alignment test setup by sweep generator

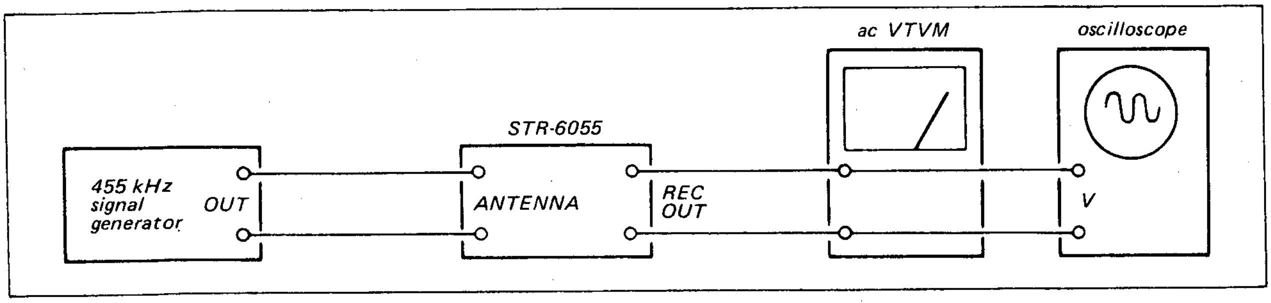


Fig. 3-11. A-m i-f strip alignment test setup by rf signal generator

3-7. A-M FREQUENCY COVERAGE AND TRACKING ALIGNMENT

Preparation

Remove the top cover as described in Procedure 2-3 on page 16. Then, set the FUNCTION switch to AM.

Signal Generator Method

Test Equipment Required

1. A-m signal generator
2. Loop antenna
3. Ac VTVM or oscilloscope

Procedure

With the equipment connected as shown in Fig. 3-12, follow the procedures given in Table 3-4 when performing this alignment with an a-m signal generator.

Off-the-Air Signal Method

An accurate frequency-coverage and tracking alignment can also be performed by utilizing off-the-air local a-m signals. However, before performing the following procedure, be sure that the dial pointer is correctly positioned as described in the Procedure 2-6 on page 19.

Frequency Coverage Alignment

Note:

▲	USA Model	Serial No. up to 810,400	See Fig. 3-9.
	Canada Model ...	Serial No. up to 700,300	
	EP Model	Serial No. up to 553,000	
○	USA Model........	Serial No. 810,401 and later	See Fig. 3-14.
	Canada Model ...	Serial No. 700,301 and later	
	EP Model...........	Serial No. 553,001 and later	
	UK Model	Serial No. 600,001 and later	
	AEP Model	Serial No. 900,001 and later	

Procedure

1. Tune the receiver to the lowest-frequency station in your locality. Check the dial scale for a calibration accuracy of ±20 kHz from the carrier frequency. If the dial calibration error exceeds this limit, turn the local oscillator-coil $\begin{smallmatrix}\text{L304}(\blacktriangle)\\ \text{T301}(\circ)\end{smallmatrix}$ slightly until optimum dial calibration is obtained.
2. Tune the receiver to the highest-frequency station in your locality. If the dial calibration error exceeds ±30 kHz from the carrier frequency, adjust local-oscillator trimmer-capacitor $\begin{smallmatrix}\text{CT301}(\blacktriangle)\\ \text{CT302}(\circ)\end{smallmatrix}$ to obtain maximum calibration accuracy. Repeat the above steps two or three times.

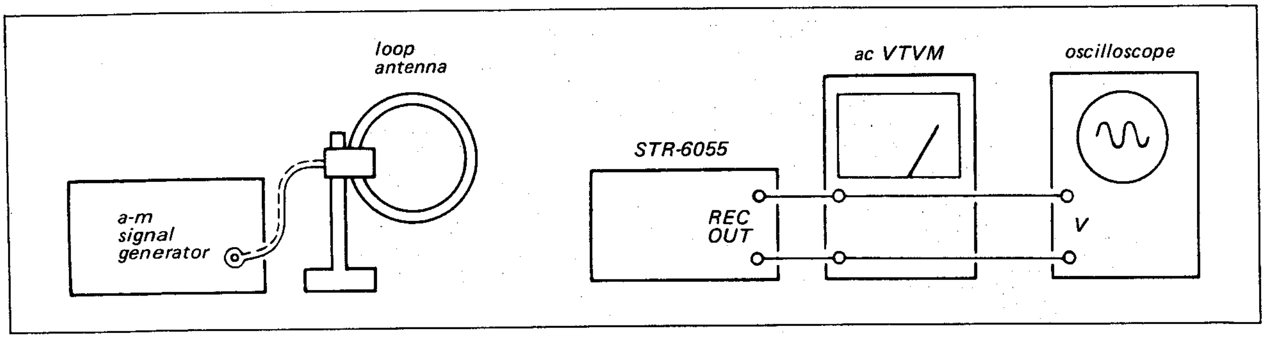


Fig. 3-12. A-m frequency coverage and tracking alignment test setup

Tracking Alignment

1. Tune the set to the station whose carrier frequency is closest to 620 kHz and adjust the position of a-m bar antenna core (see Fig. 3-13) to obtain maximum output.
2. Tune the set to the station whose carrier frequency is closest to 1,400 kHz and adjust antenna trimmer capacitor CT302(▲) CT301(○) to obtain maximum output.
3. Repeat the above steps two or three times.

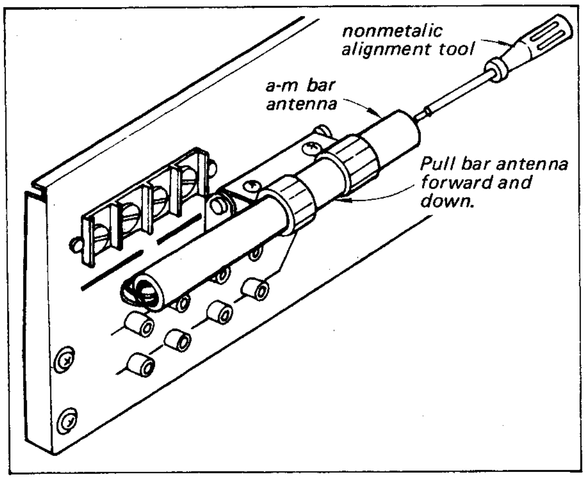


Fig. 3-13. A-m bar antenna core alignment

TABLE 3-4 A-M FREQUENCY COVERAGE AND TRACKING ALIGNMENT

	A-M FREQUENCY COVERAGE ALIGNMENT			SG Coupling ....Loop Antenna SG Output Level ....400 Hz, 30% (as low as possible)	
Step	**SG Frequency**	**Dial Indication**	**Ac VTVM Connection**	**Adjust**	**Indication**
1	550 kHz	550 kHz	REC OUT	OSC coil L304(▲) T301(○)	Maximum VTVM reading
2	1,600 kHz	1,600 kHz		OSC trimmer CT301(▲) CT302(○)	
	A-M TRACKING ALIGNMENT			SG Coupling ....Loop Antenna SG Output Level ....400 Hz, 30% (as low as possible)	
1	600 kHz	Tune to the SG signal.	REC OUT	Bar antenna coil L303(▲) L904(○) (See Fig. 3-13)	Maximum VTVM reading
2	1,400 kHz			Antenna trimmer CT302(▲) CT301(○)	

Note:

	Model	Serial No.	
▲	USA Model	Serial No. up to 810,400	See Fig. 3-9.
	Canada Model	Serial No. up to 700,300	
	EP Model	Serial No. up to 553,000	
○	USA Model	Serial No. 810,401 and later	See Fig. 3-14.
	Canada Model	Serial No. 700,301 and later	
	EP Model	Serial No. 553,001 and later	
	UK Model	Serial No. 600,001 and later	
	AEP Model	Serial No. 900,001 and later	

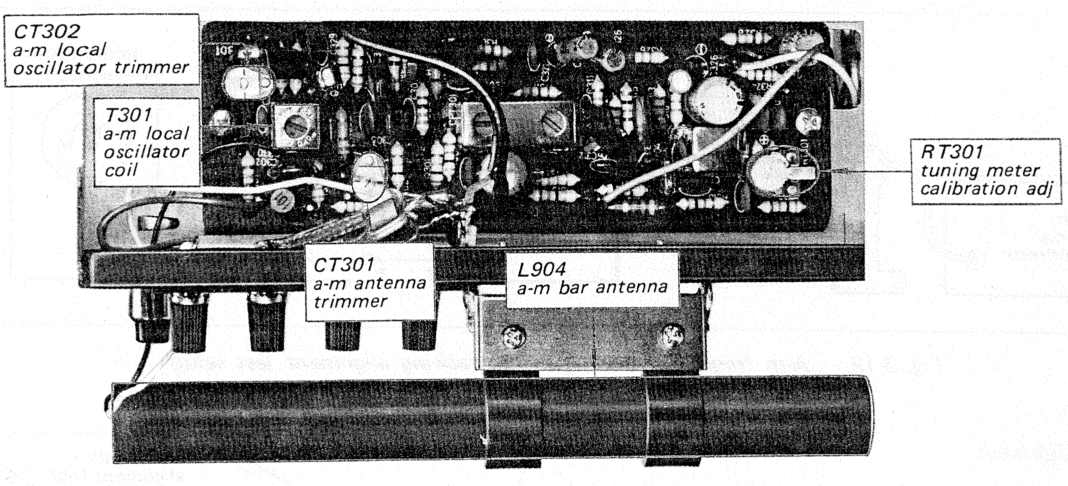

CT302
a-m local
oscillator trimmer
T301
a-m local
oscillator
coil
RT301
tuning meter
calibration adj
CT301
a-m antenna
trimmer
L904
a-m bar antenna

Fig. 3-14. Adjustment parts location

3-8. TUNING METER CALIBRATION

Test Equipment Required

1. Signal generator
2. Ac VTVM
3. Loop antenna
4. Alignment tools

Preparation

1. Remove the top cover as described in Procedure 2-3 on page 16.

Procedure

1. Connect the test equipment as shown in Fig. 3-15.
2. Set the a-m signal generator and receiver controls as follows:

   Carrier frequency .... 1,000 kHz
   Output level...................... 104 dB/m (160 mV/m) at a-m bar antenna
   Modulation (400 Hz) 30%
   VOLUME control .... Minimum
   FUNCTION switch .... AM
   MONITOR switch .... SOURCE

3. Precisely tune the set to the signal and adjust R324 (RT301) (■) to obtain the meter pointer within 2 mm ($^{5}/_{64}$") left of its maximum indication as shown in Fig. 3-16.

■ **Note:** R324 (see Fig. 3-9)
Applicable Serial Numbers
USA Model .... Up to 810,400
Canada Model......... Up to 700,300
EP Model .... Up to 553,000.

RT301 (see Fig. 3-14)
Applicable Serial Numbers
USA Model .... 810,401 and later
Canada Model......... 700,301 and later
EP Model .... 553,001 and later
UK Model............... 600,001 and later
AEP Model .... 900,001 and later

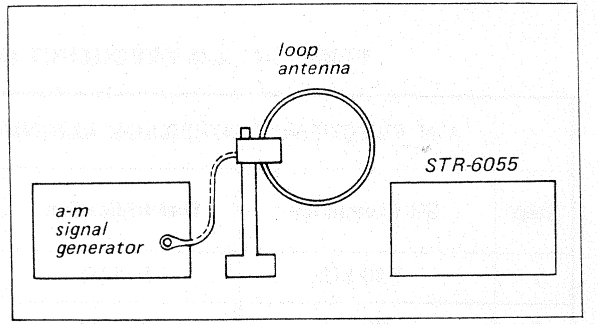

loop
antenna
STR-6055
a-m
signal
generator

Fig. 3-15. Tuning meter calibration test setup

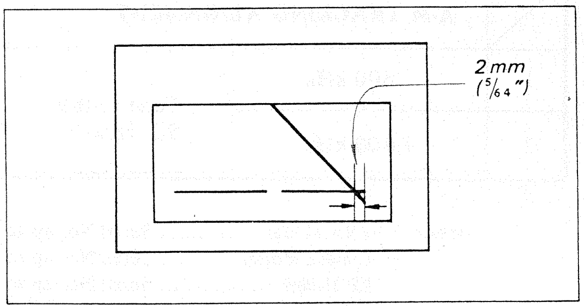


Fig. 3-16. Tuning meter calibration

3-9. POWER AMPLIFIER ADJUSTMENT

Note: There are two adjustment items in the power amplifier. One is dc-bias adjustment and the other is dc-balance adjustment. These adjustments should be repeated alternately two or three times after replacing any of the power transistors until the best operation is obtained.

1. Dc-Bias Adjustment

Serious deficiencies in performance, such as thermal runaway of power transistors, will result if this adjustment is improperly set.

CAUTION

To avoid accidental power transistor damage, increase the ac line voltage gradually, using a variable transformer, while measuring the voltage across emitter of Q709 (Q759) and collector of Q710 (Q760) as shown in Fig. 3-17 and 3-18. Check to see that the reading does not exceed 50 mV. If it does, turn off the power immediately, then check and repair the trouble in the power amplifier board.

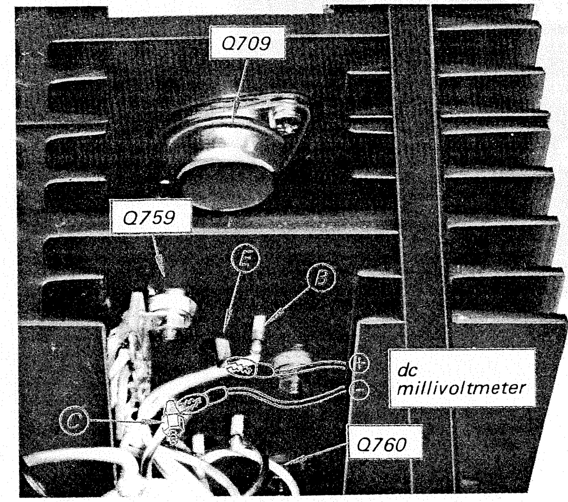


Fig. 3-17. Dc millivoltmeter connection

Test Equipment Required

1. Dc millivoltmeter
2. Variable transformer
3. Screwdriver with 3 mm ($^1/_8$") blade

Preparation

1. Remove the top cover as described in Procedure 2-3 on page 16.
2. Connect the dc millivoltmeter across emitter of Q709 (Q759) and collector of Q710 (Q760) as shown in Fig. 3-17 and 3-18.
3. Apply a drop of cement solvent to the RV701, RV702, RV751 and RV752 then wait a few seconds for the cement to dissolve.

Procedure

1. Set the adjustable resistors (see Fig. 3-19) on the power-amplifier board as follows:

   RV702 .... fully
   (L-CH, dc bias) counterclockwise

   RV752
   (R-CH, dc bias)........... fully clockwise

   RV701, RV751
   (dc balance) .... mid-position

2. Set the variable transformer for minimum output.
3. Turn the POWER switch ON, and then increase the line voltage up to the rated value.

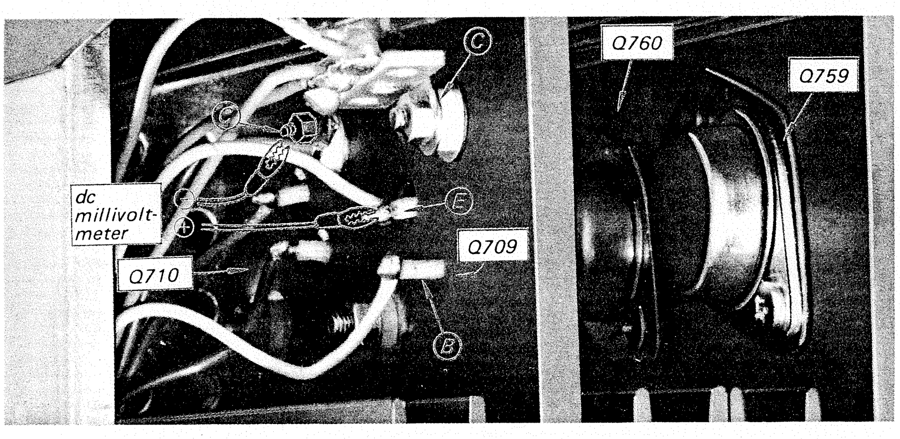


Fig. 3-18. Dc millivoltmeter connection

4. Adjust RV702 and RV752 to obtain a 50 mV reading on the meter, and then perform the dc-balance adjustment.

2. Dc-Balance Adjustment

Excessive harmonic distortion at high levels will result if this adjustment is improperly set.

Test Equipment Required

1. Dc null meter or dc millivoltmeter
2. Screwdriver with 3 mm (1/8") blade

Preparation

1. Set the SPEAKER switch to MAIN.
2. Connect the dc null meter or dc millivoltmeter to the MAIN speaker output terminal.

Procedure

1. Turn the POWER switch ON, and then adjust RV701 (RV751) for 0V reading on the meter.
2. After 10 minutes warm-up, alternately repeat this and the dc bias adjustment two or three times.
3. After completing the adjustment, apply a drop of lock paint to RV701 and RV702 (RV751 and RV752).

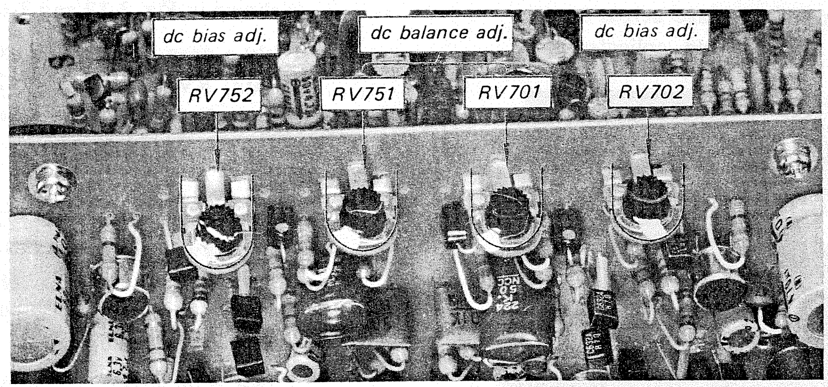


Fig. 3-19. Adjustment parts location

SECTION 4
REPACKING

The STR-6055 original shipping carton and packing material are the ideal container for shipping the unit. However to secure the maximum protection, the STR-6055 must be repacked in these materials precisely as before. The proper repacking procedures are shown in Fig. 4-1.

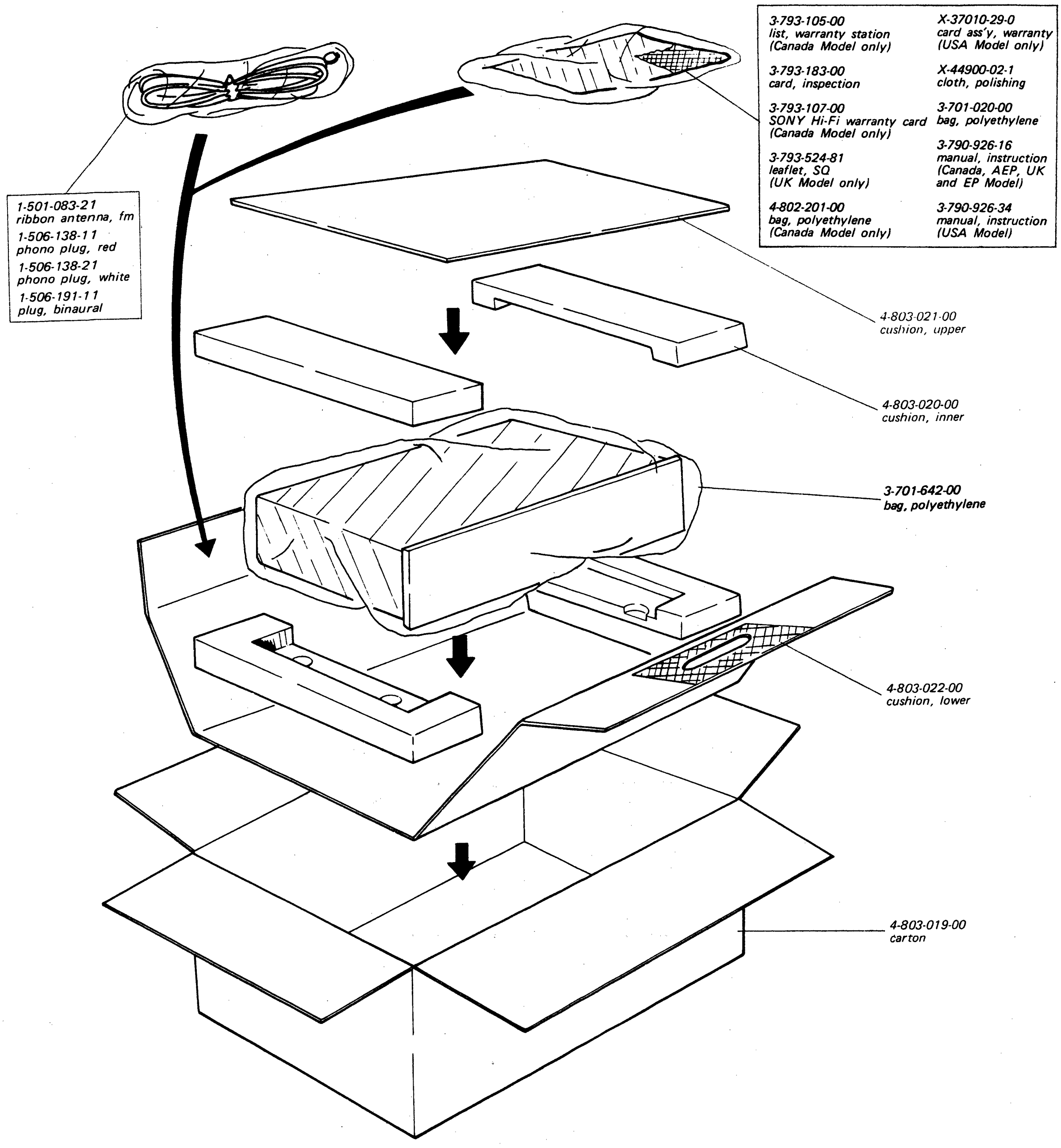
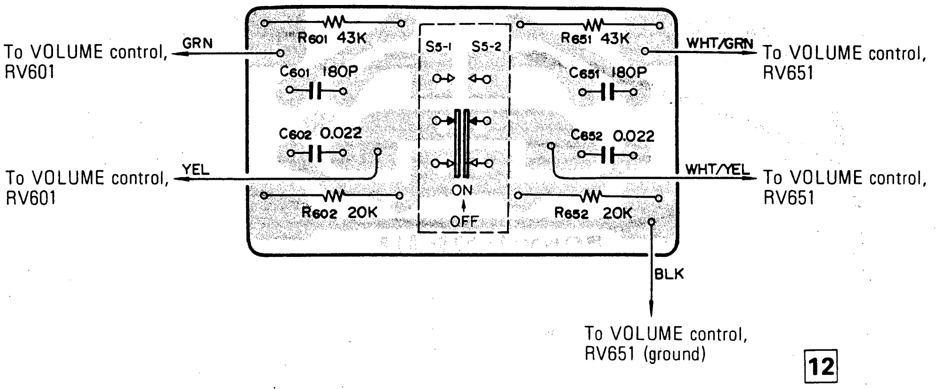

3-793-105-00
list, warranty station
(Canada Model only)
X-37010-29-0
card ass'y, warranty
(USA Model only)
3-793-183-00
card, inspection
X-44900-02-1
cloth, polishing
3-793-107-00
SONY Hi-Fi warranty card
(Canada Model only)
3-701-020-00
bag, polyethylene
3-793-524-81
leaflet, SQ
(UK Model only)
3-790-926-16
manual, instruction
(Canada, AEP, UK and EP Model)
4-802-201-00
bag, polyethylene
(Canada Model only)
3-790-926-34
manual, instruction
(USA Model)
1-501-083-21
ribbon antenna, fm
1-506-138-11
phono plug, red
1-506-138-21
phono plug, white
1-506-191-11
plug, binaural
4-803-021-00
cushion, upper
4-803-020-00
cushion, inner
3-701-642-00
bag, polyethylene
4-803-022-00
cushion, lower
4-803-019-00
carton

Fig. 4-1. Repacking

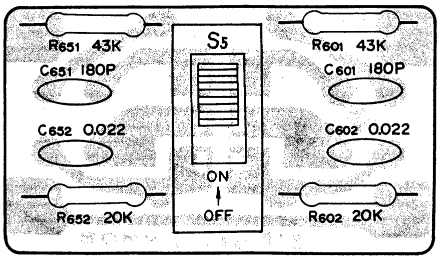
SECTION 5
DIAGRAMS

5-1. MOUNTING DIAGRAM – Loudness Control Board –

– Conductor Side –


To VOLUME control, RV601
GRN
R601 43K
C601 180P
C602 0.022
To VOLUME control, RV601
YEL
R602 20K
S5-1
S5-2
ON
OFF
R651 43K
WHT/GRN
To VOLUME control, RV651
C651 180P
C652 0.022
WHT/YEL
To VOLUME control, RV651
R652 20K
BLK
To VOLUME control, RV651 (ground)
12

– Component Side –


R651 43K
C651 180P
C652 0.022
R652 20K
S5
ON
OFF
R601 43K
C601 180P
C602 0.022
R602 20K

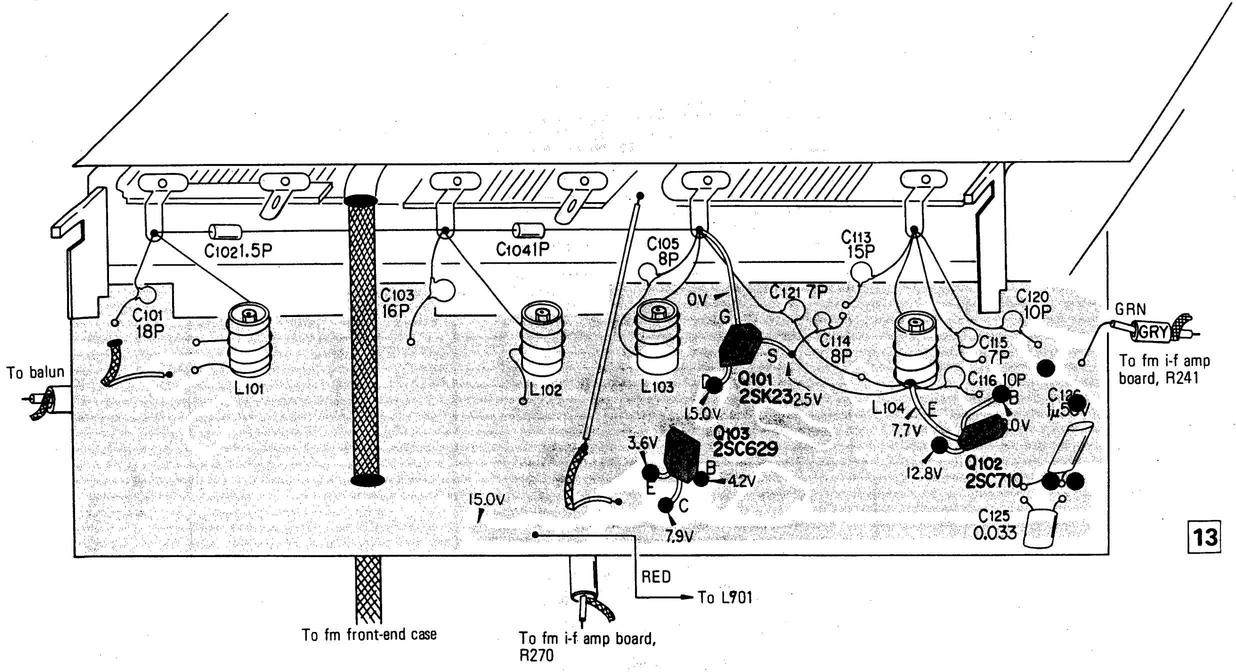
Note: The parts in the loudness control board have been changed as follows:

Ref. No.	Former value	New value
R601 (R651)	68K	43K
R602 (R652)	10K	20K
C601 (C651)	100P	180P
C602 (C652)	0.047	0.022

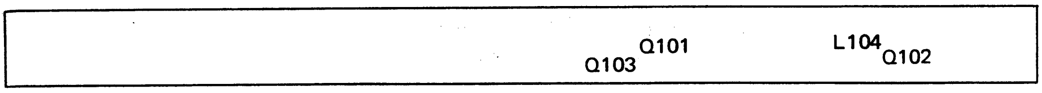
When replacing these parts, change to the new value for both channels.

5-2. MOUNTING DIAGRAM – Fm Front-End –

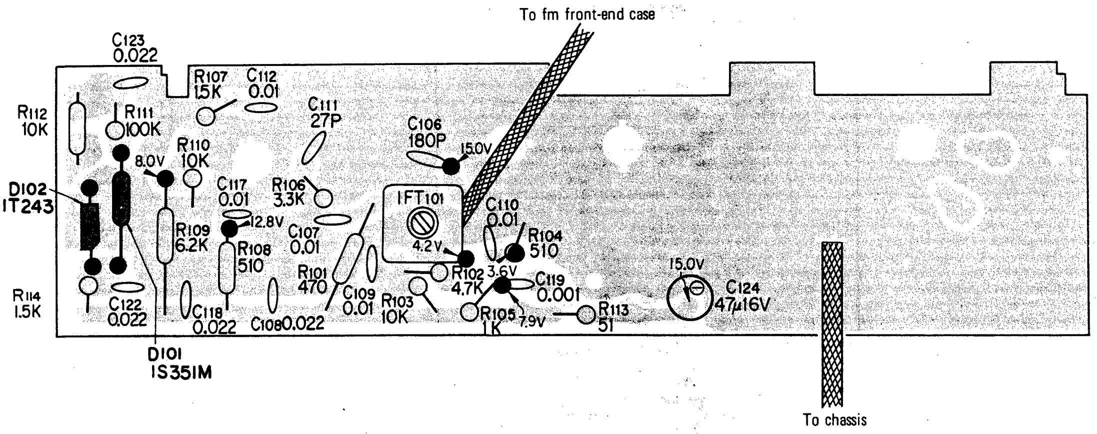
– Conductor Side –


C102 1.5P
C104 1P
C105 8P
C113 15P
C101 18P
C103 16P
C121 7P
C120 10P
GRN
GRY
To fm i-f amp board, R241
To balun
L101
L102
L103
0V
G
S
D
Q101 2SK23
2.5V
C114 8P
C115 7P
C116 10P
B
C126 1μ50V
L104
E
7.7V
0V
15.0V
3.6V
Q103 2SC629
B
4.2V
E
C
7.9V
12.8V
Q102 2SC710
C125 0.033
15.0V
13
RED
To L701
To fm front-end case
To fm i-f amp board, R270

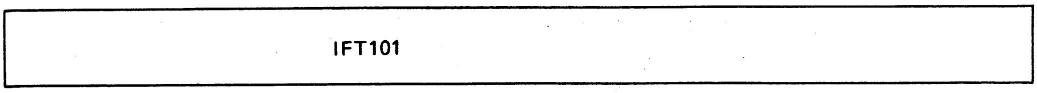
Transistor Location


Q101
Q103
L104
Q102

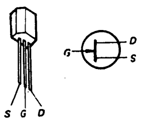
– Component Side –


To fm front-end case
C123 0.022
R107 15K
C112 0.01
R112 10K
R111 100K
C111 27P
C106 180P
15.0V
R110 10K
8.0V
D102 1T243
C117 0.01
R106 3.3K
IFT101
C110 0.01
12.8V
C107 0.01
R109 6.2K
R108 510
R104 510
4.2V
R101 470
R102 4.7K
3.6V
C119 0.001
15.0V
C124 47μ16V
R114 1.5K
C122 0.022
C118 0.022
C108 0.022
C109 0.01
R103 10K
R105 1K
7.9V
R113 51
D101 1S351M
To chassis

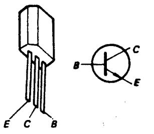
Adjustment Parts Location



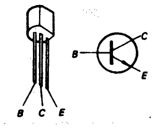
2SK23



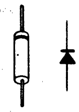
2SC629



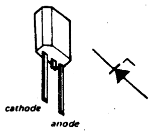
2SC710



1S351M

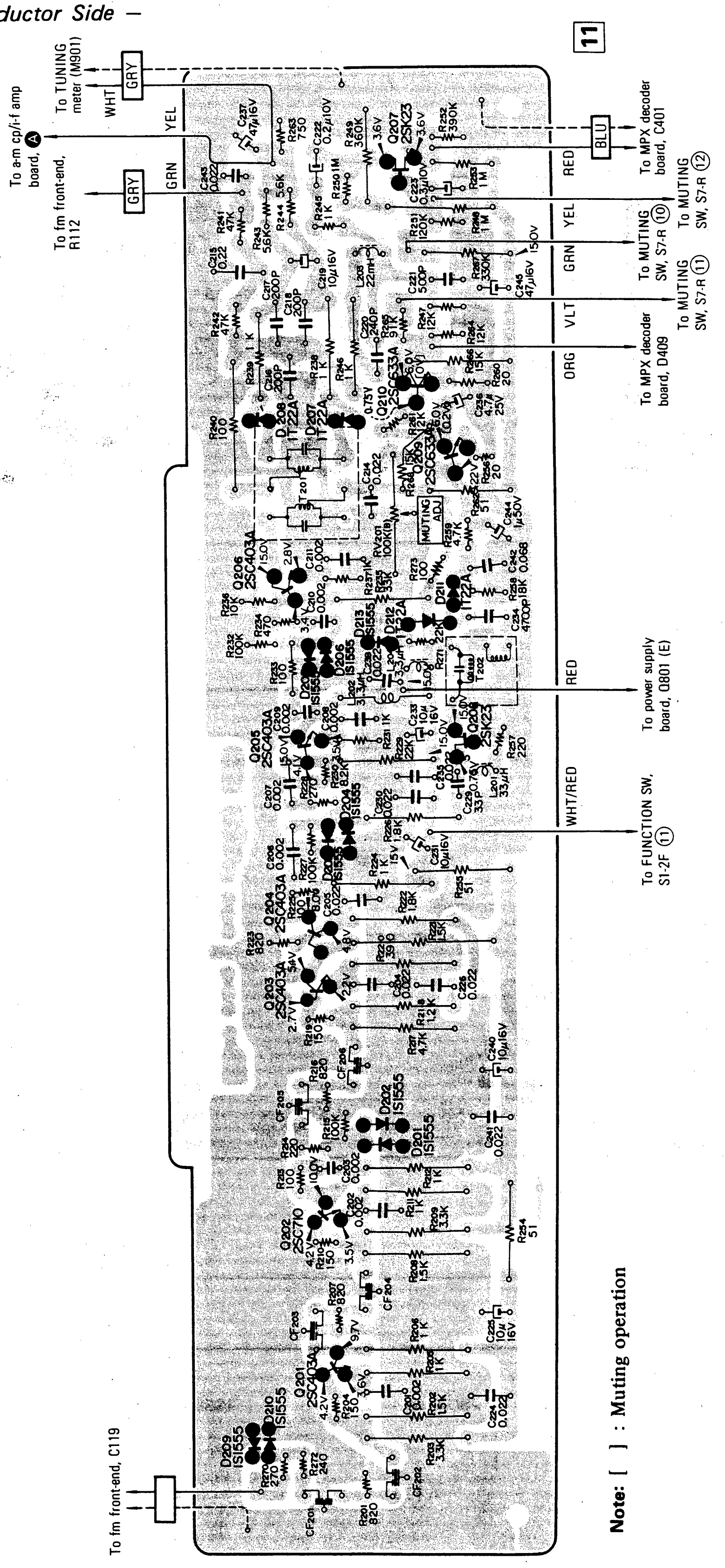


1T243

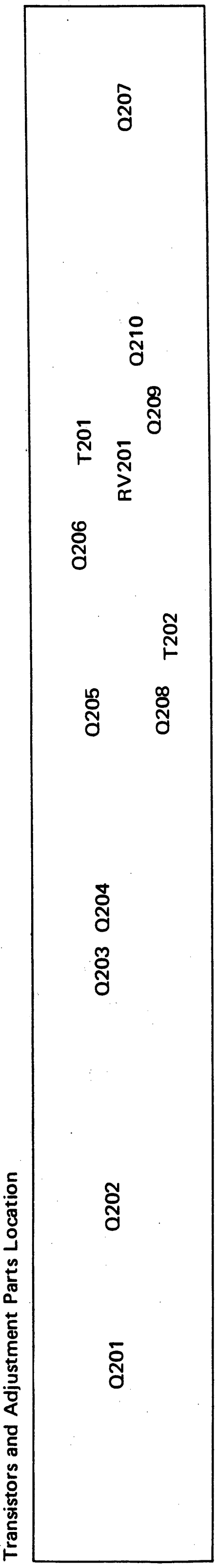

cathode
anode

5-3. MOUNTING DIAGRAM – Fm I-f Amp Board –

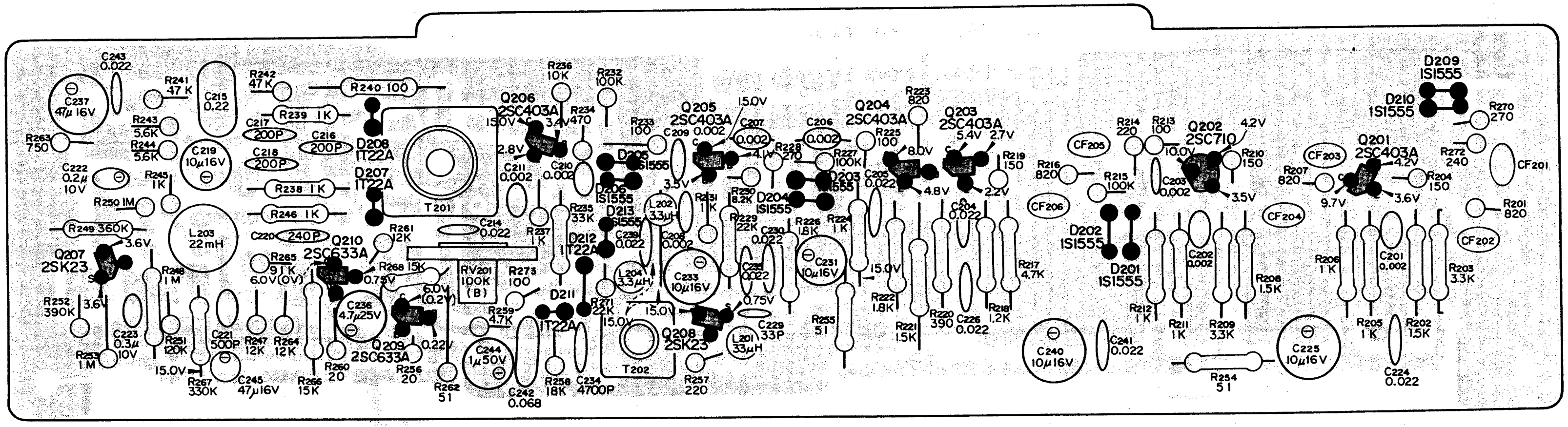
– Conductor Side –


11
To a-m cp/i-f amp board, Ⓐ
To TUNING meter (M901)
WHT
GRY
YEL
GRN
GRY
To fm front-end, R112
BLU
To MPX decoder board, C401
RED
YEL
GRN
VLT
ORG
To MUTING SW, S7-R ⑫
To MUTING SW, S7-R ⑩
To MUTING SW, S7-R ⑪
To MPX decoder board, D409
RED
To power supply board, Q801 (E)
WHT/RED
To FUNCTION SW, S1-2F ⑪
To fm front-end, C119
Q201 2SC403A
Q202 2SC710
Q203 2SC403A
Q204 2SC403A
Q205 2SC403A
Q206 2SC403A
Q207 2SK23
Q208 2SK23
Q209 2SC633A
Q210 2SC633A
T201
T202
RV201 100K(B)
MUTING ADJ
D201 1S1555
D202 1S1555
D209 1S1555
D210 1S1555
D207 1T22A
D208 1T22A
D211 1T22A
D212 1T22A
D213 1S1555

Note: [ ] : Muting operation

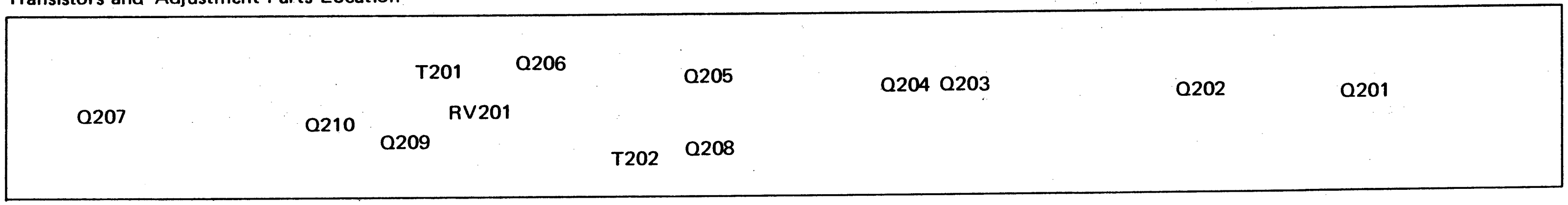

Transistors and Adjustment Parts Location
Q201
Q202
Q203
Q204
Q205
Q208
T202
Q206
RV201
T201
Q209
Q210
Q207

— Component Side —

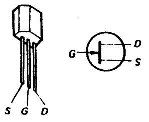

C243 0.022
C237 47μ 16V
R263 750
R241 47 K
C215 0.22
R243 5.6K
R244 5.6K
C222 0.2μ 10V
R245 1K
C219 10μ16V
R250 1M
R249 360K
3.6V
Q207 2SK23
R246 1M
R252 390K
3.6V
C223 0.3μ 10V
R253 1M
R251 120K
15.0V
R267 330K
L203 22mH
R242 47K
C217 200P
C218 200P
C216 200P
R239 1K
R240 100
R238 1K
R246 1K
C220 240P
C221 500P
R247 12K
R264 12K
C245 47μ16V
R265 91K
6.0V(0V)
Q210 2SC633A
R266 15K
R260 20
C236 4.7μ25V
D208 1T22A
D207 1T22A
T201
R261 12K
R268 15K
0.75V
6.0V
(0.2V)
Q209 2SC633A
0.22V
R256 20
R262 51
C244 1μ50V
C214 0.022
RV201 100K (B)
R273 100
R259 4.7K
C242 0.068
Q206 2SC403A
15.0V
3.4V
2.8V
R236 10K
R234 470
C211 0.002
C210 0.002
R232 100K
R233 100
R237 1K
R235 33K
D205 1S1555
D206 1S1555
D213 1S1555
D212 1T22A
D211 1T22A
C209 0.002
Q205 2SC403A
15.0V
3.5V
L202 3.3μH
L204 3.3μH
C239 0.022
C208 0.002
R231 1K
C233 10μ16V
R271 22K
15.0V
T202
R258 18K
C234 4700P
Q208 2SK23
0.75V
C229 33P
L201 33μH
R257 220
C207 0.002
4.1V
R228 270
R230 8.2K
R229 22K
C230 0.022
C232 0.022
D204 1S1555
D203 1S1555
C206 0.002
R227 100K
R226 1.8K
R224 1K
C231 10μ16V
R255 51
Q204 2SC403A
R223 820
R225 100
8.0V
4.8V
C205 0.022
15.0V
R222 1.8K
R221 1.5K
R220 390
C226 0.022
Q203 2SC403A
5.4V 2.7V
2.2V
R219 150
C204 0.022
R218 1.2K
R217 4.7K
CF205
CF206
R216 820
R214 220
R213 100
R215 100K
D202 1S1555
D201 1S1555
C240 10μ16V
C241 0.022
R212 1K
Q202 2SC710
4.2V
10.0V
3.5V
C203 0.002
R210 150
C202 0.002
R211 1K
R209 3.3K
R208 1.5K
R254 51
CF203
CF204
R207 820
Q201 2SC403A
9.7V
4.2V
3.6V
R204 150
R206 1K
C201 0.002
R205 1K
C225 10μ16V
R202 1.5K
C224 0.022
R203 3.3K
CF202
R272 240
R270 270
D209 1S1555
D210 1S1555
CF201
R201 820

Note: [ ] : Muting operation

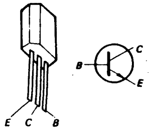
Transistors and Adjustment Parts Location


Q207
Q210
Q209
T201
RV201
Q206
T202
Q205
Q208
Q204 Q203
Q202
Q201

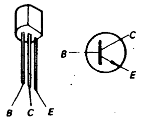
2SK23



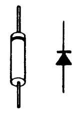
2SC403A
2SC633A



2SC710



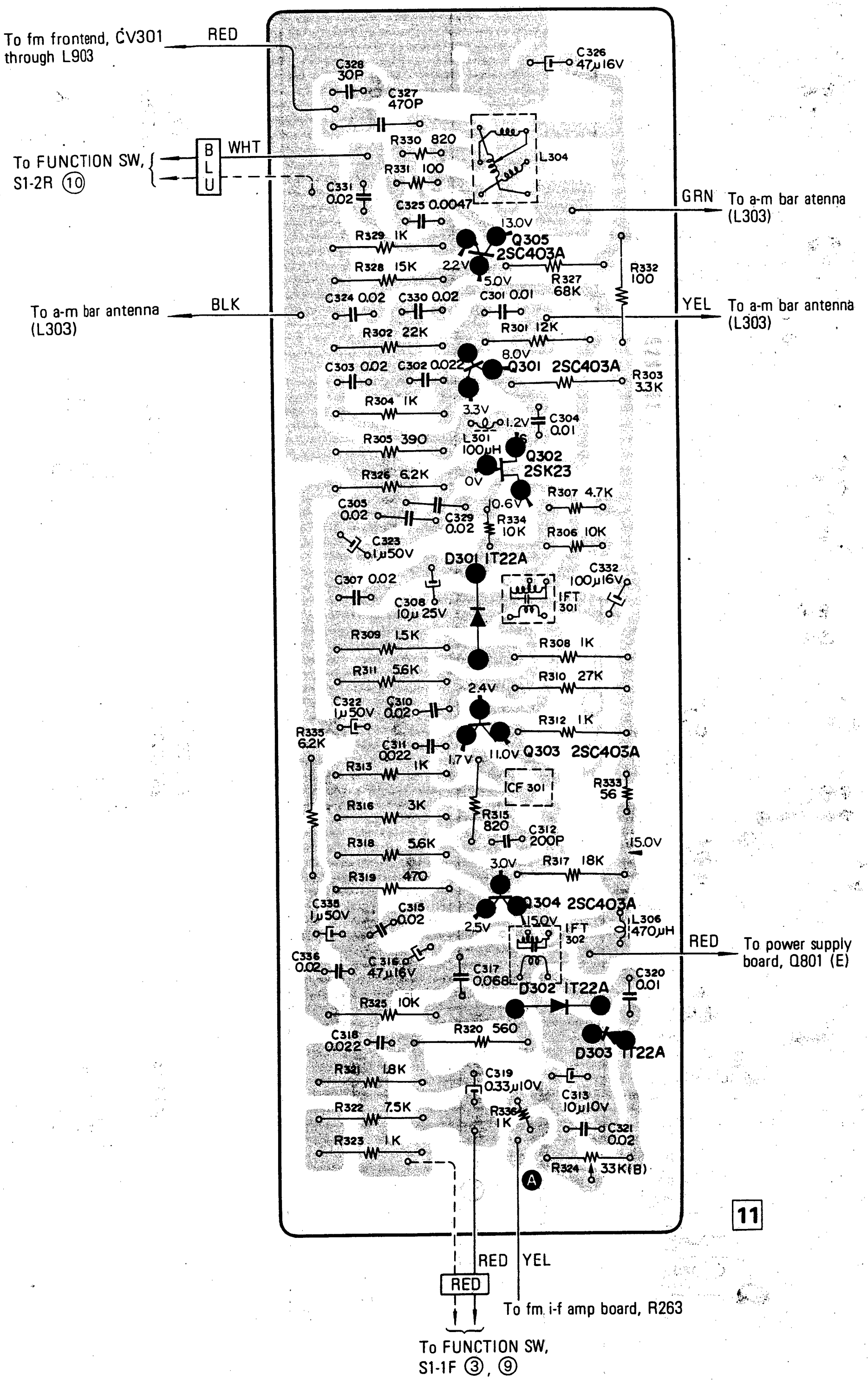
1T22A
1S1555



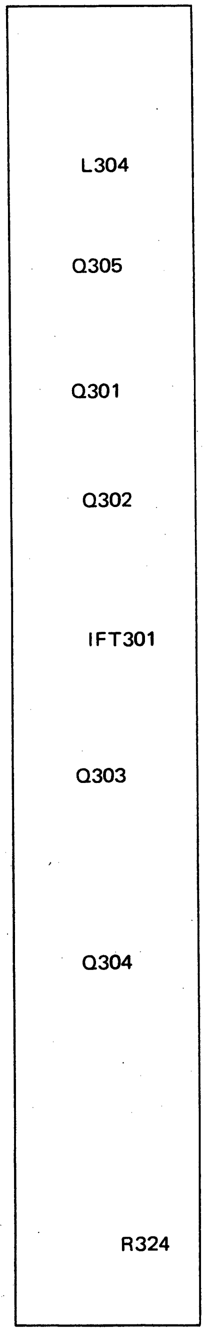
5-4. MOUNTING DIAGRAM – A-m Cp/I-f Amp Board –

– Conductor Side –

Applicable Serial Numbers:
USA Model ..... Up to 810,400
Canada Model... Up to 700,300
EP Model .... Up to 553,000

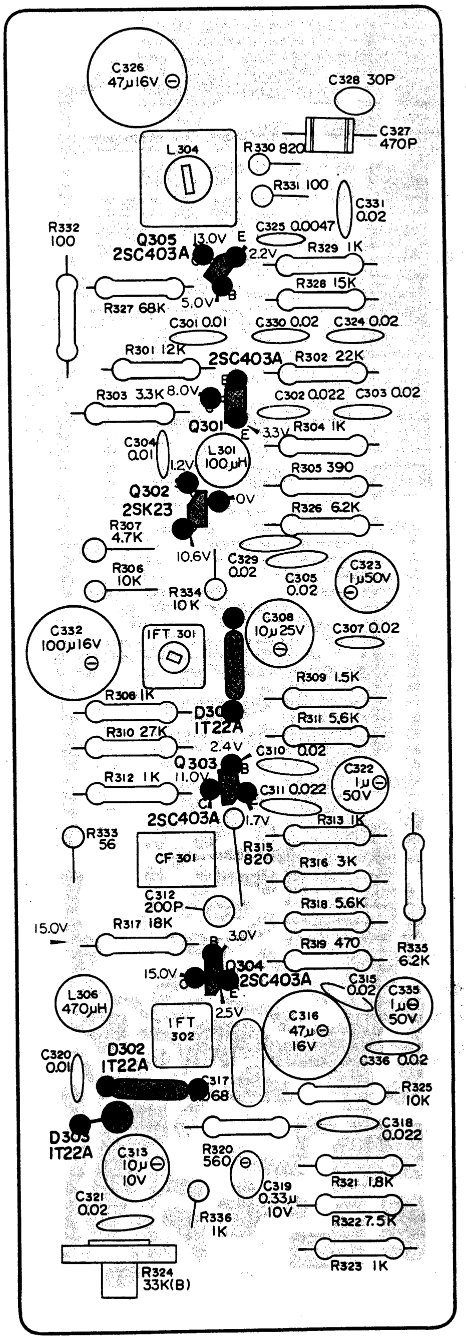

To fm frontend, CV301 through L903
RED
C328 30P
C326 47μ16V
C327 470P
To FUNCTION SW, S1-2R ⑩
B L U
WHT
R330 820
R331 100
L304
C331 0.02
C325 0.0047
GRN
To a-m bar atenna (L303)
R329 1K
13.0V
Q305 2SC403A
R328 15K
2.2V
5.0V
R327 68K
R332 100
To a-m bar antenna (L303)
BLK
C324 0.02
C330 0.02
C301 0.01
YEL
To a-m bar antenna (L303)
R302 22K
R301 12K
8.0V
C303 0.02
C302 0.022
Q301 2SC403A
R303 3.3K
R304 1K
3.3V
1.2V
C304 0.01
R305 390
L301 100μH
Q302 2SK23
R326 6.2K
0V
R307 4.7K
C305 0.02
C329 0.02
0.6V
R334 10K
R306 10K
C323 1μ50V
D301 1T22A
C332 100μ16V
C307 0.02
C308 10μ 25V
IFT 301
R309 1.5K
R308 1K
R311 5.6K
R310 27K
2.4V
C322 1μ50V
C310 0.02
R312 1K
R335 6.2K
C311 0.022
1.7V
11.0V
Q303 2SC403A
R313 1K
CF 301
R333 56
R316 3K
R315 820
C312 200P
R318 5.6K
15.0V
3.0V
R317 18K
R319 470
Q304 2SC403A
C335 1μ50V
C315 0.02
2.5V
15.0V
IFT 302
L306 470μH
RED
To power supply board, Q801 (E)
C336 0.02
C316 47μ16V
C317 0.068
D302 1T22A
C320 0.01
R325 10K
C318 0.022
R320 560
D303 1T22A
R321 1.8K
C319 0.33μ10V
C313 10μ10V
R322 7.5K
R336 1K
C321 0.02
R323 1K
R324 33K(B)
A
11
RED
YEL
RED
To fm i-f amp board, R263
To FUNCTION SW, S1-1F ③, ⑨

Transistors and Adjustment Parts Location

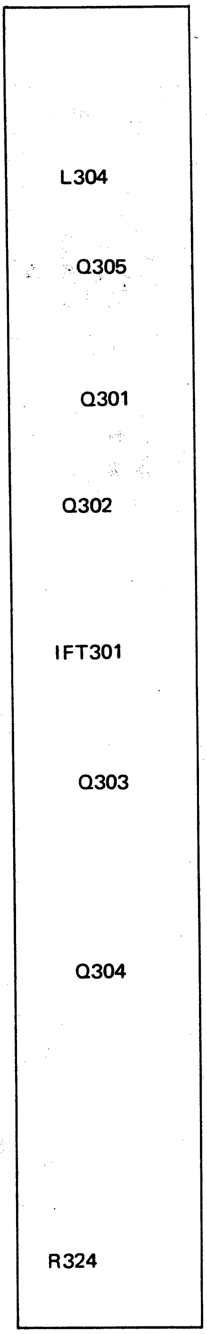

L304
Q305
Q301
Q302
IFT301
Q303
Q304
R324

– Component Side –

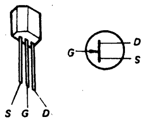
Applicable Serial Numbers:
USA Model ..... Up to 810,400
Canada Model... Up to 700,300
EP Model .... Up to 553,000


C326 47µ16V ⊖
C328 30P
C327 470P
L304
R330 820
R331 100
C331 0.02
R332 100
Q305 2SC403A
13.0V
E
2.2V
C325 0.0047
R329 1K
R328 15K
R327 68K
5.0V
B
C301 0.01
C330 0.02
C324 0.02
R301 12K
2SC403A
R302 22K
R303 3.3K
8.0V
C302 0.022
C303 0.02
Q301
E
3.3V
R304 1K
C304 0.01
1.2V
L301 100µH
R305 390
Q302 2SK23
0V
R326 6.2K
R307 4.7K
10.6V
C329 0.02
C323 1µ50V ⊖
R306 10K
R334 10K
C305 0.02
C332 100µ16V ⊖
IFT 301
C308 10µ25V ⊖
C307 0.02
R308 1K
R309 1.5K
D301 1T22A
R311 5.6K
R310 27K
2.4V
C310 0.02
Q303
C322 1µ⊖ 50V
R312 1K
11.0V
C311 0.022
2SC403A
1.7V
R313 1K
R333 56
CF 301
R315 820
R316 3K
C312 200P
R318 5.6K
15.0V
R317 18K
3.0V
R319 470
R335 6.2K
15.0V
Q304 2SC403A
C315 0.02
C335 1µ⊖ 50V
L306 470µH
IFT 302
2.5V
C316 47µ⊖ 16V
C336 0.02
C320 0.01
D302 1T22A
C317 0.068
R325 10K
C318 0.022
D303 1T22A
C313 10µ⊖ 10V
R320 560
R321 1.8K
C321 0.02
R336 1K
C319 0.33µ 10V
R322 7.5K
R324 33K(B)
R323 1K

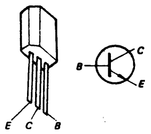
Transistors and Adjustment Parts Location


L304
Q305
Q301
Q302
IFT301
Q303
Q304
R324

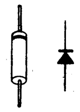
2SK23



2SC403A



1T22A

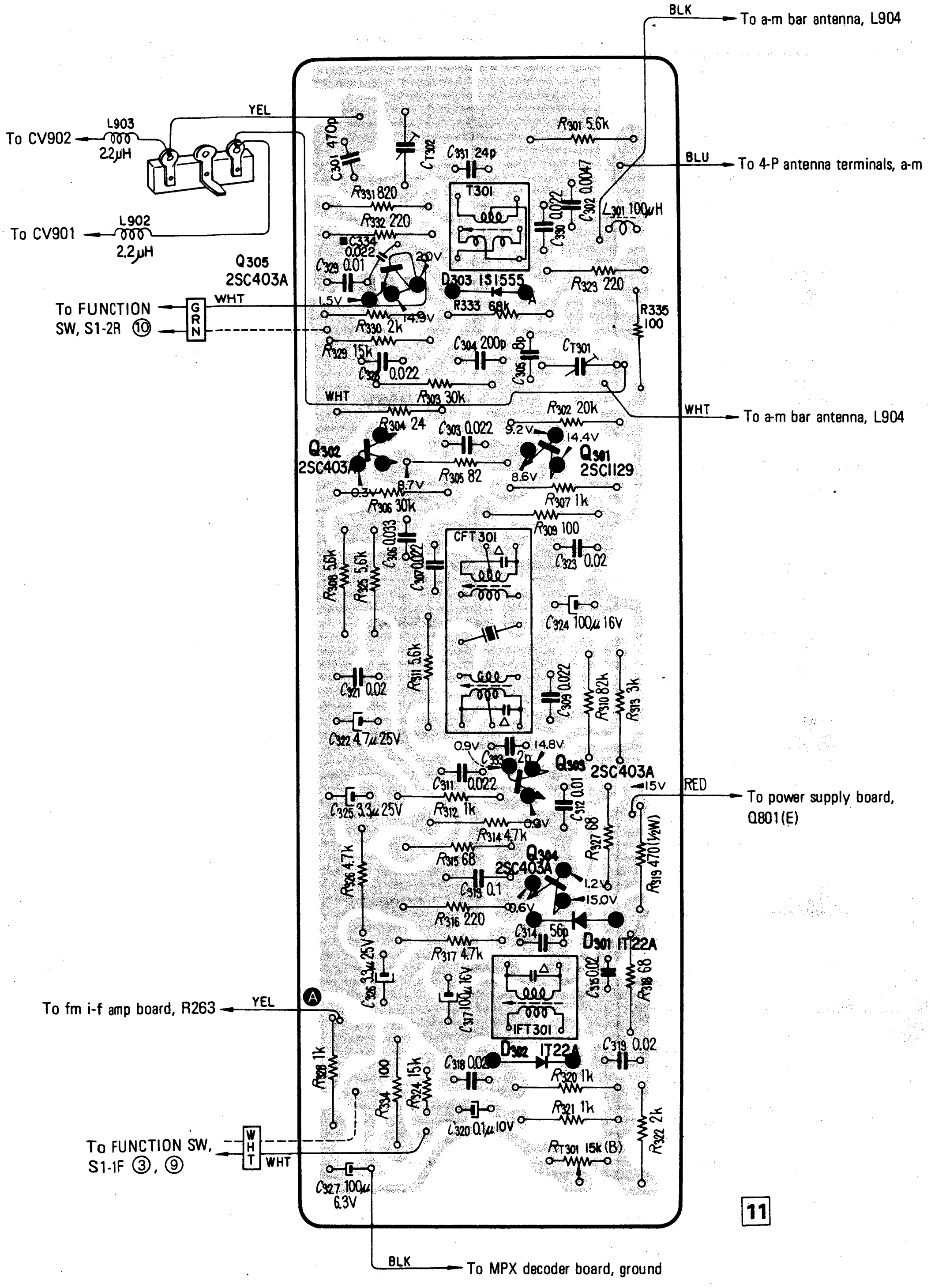


MOUNTING DIAGRAM – A-m Cp/I-f Amp Board –

– Conductor Side –

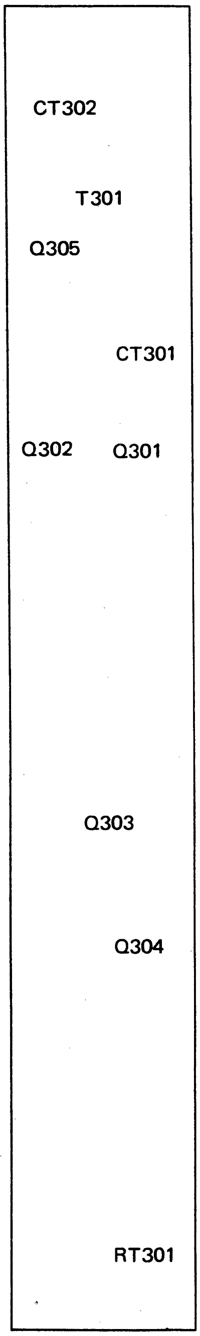
Applicable Serial Numbers:

USA Model	810,401 and later
Canada Model...	700,301 and later
EP Model	553,001 and later
UK Model.........	600,001 and later
AEP Model	900,001 and later



BLK
To a-m bar antenna, L904
To CV902
L903
2.2μH
YEL
To CV901
L902
2.2μH
Q305
2SC403A
WHT
To FUNCTION SW, S1-2R ⑩
GRN
BLU
To 4-P antenna terminals, a-m
C301 470p
CT302
C331 24p
R301 5.6k
R331 820
R332 220
T301
C330 0.022
C302 0.0047
L301 100μH
■C334 0.022
C329 0.01
20V
1.5V
D303 1S1555
R323 220
R333 68k
14.9V
R330 2k
R335 100
R329 15k
C328 0.022
C304 200p
C305 68p
CT301
WHT
R303 30k
R302 20k
WHT
To a-m bar antenna, L904
R304 24
C303 0.022
9.2V
14.4V
Q302 2SC403A
Q301 2SC1129
R305 82
8.6V
0.3V
8.7V
R306 30k
R307 1k
C306 0.033
C307 0.022
CFT301
R309 100
C323 0.02
R308 5.6k
R325 5.6k
C324 100μ 16V
C321 0.02
R311 5.6k
C309 0.022
R310 82k
R313 3k
C322 4.7μ 25V
0.9V
C333 2p
14.8V
Q303 2SC403A
C311 0.022
C312 0.01
15V
RED
To power supply board, Q801(E)
C325 3.3μ 25V
R312 1k
0.9V
R314 4.7k
R327 68
R319 470(½W)
R326 4.7k
R315 68
Q304 2SC403A
C313 0.1
1.2V
15.0V
0.6V
R316 220
C314 56p
D301 1T22A
R317 4.7k
C326 3.3μ 25V
C317 100μ 16V
C315 0.02
R318 68
IFT301
To fm i-f amp board, R263
YEL
A
R328 1k
D302 1T22A
C319 0.02
C318 0.02
R334 100
R324 15k
R320 1k
R321 1k
C320 0.1μ 10V
R322 2k
RT301 15k(B)
To FUNCTION SW, S1-1F ③, ⑨
WHT
C327 100μ 6.3V
BLK
To MPX decoder board, ground
11

Transistors and Adjustment Parts Location

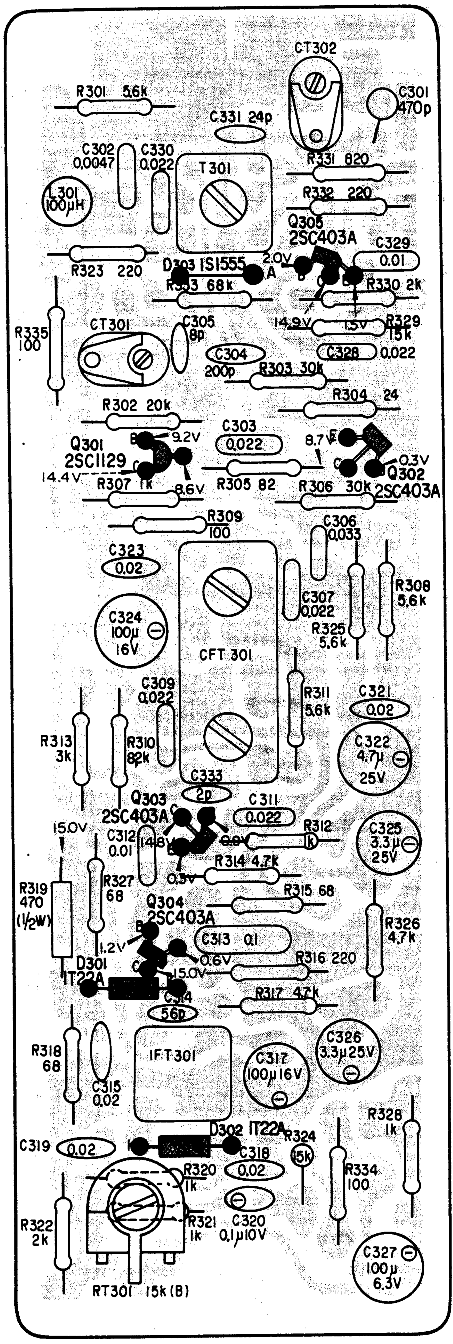


CT302
T301
Q305
CT301
Q302
Q301
Q303
Q304
RT301

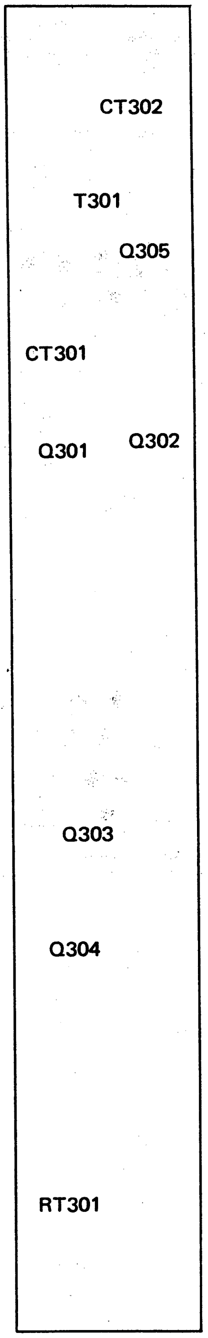
Note: ■ C334 is mounted on the conductor side.

– Component Side –

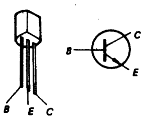
Applicable Serial Numbers:
USA Model ...... 810,401 and later
Canada Model... 700,301 and later
EP Model .... 553,001 and later
UK Model......... 600,001 and later
AEP Model ...... 900,001 and later


CT302
R301 5.6k
C301 470p
C331 24p
C302 0.0047
C330 0.022
T301
R331 820
L301 100μH
R332 220
Q305 2SC403A
C329 0.01
R323 220
D303 1S1555
2.0V
A
R333 68k
R330 2k
R335 100
CT301
C305 8p
14.9V
1.5V
R329 15k
C304 200p
R303 30k
C328 0.022
R302 20k
R304 24
Q301 2SC1129
9.2V
C303 0.022
8.7V
0.3V
Q302 2SC403A
14.4V
R307 1k
8.6V
R305 82
R306 30k
R309 100
C306 0.033
C323 0.02
R308 5.6k
C324 100μ 16V
C307 0.022
R325 5.6k
CFT 301
C309 0.022
R311 5.6k
C321 0.02
R313 3k
R310 82k
C322 4.7μ 25V
C333 2p
Q303 2SC403A
C311 0.022
15.0V
C312 0.01
14.8V
0.6V
R312 1k
C325 3.3μ 25V
R314 4.7k
0.3V
R319 470 (1/2W)
R327 68
R315 68
Q304 2SC403A
C313 0.1
R326 4.7k
1.2V
0.6V
D301 1T22A
R316 220
15.0V
R317 47k
C314 56p
R318 68
IFT301
C317 100μ 16V
C326 3.3μ 25V
C315 0.02
D302 1T22A
R328 1k
C319 0.02
R324 15k
C318 0.02
R320 1k
R334 100
R321 1k
C320 0.1μ 10V
R322 2k
C327 100μ 6.3V
RT301 15k (B)

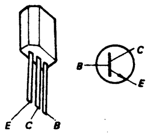
Transistors and
Adjustment Parts Location


CT302
T301
Q305
CT301
Q301
Q302
Q303
Q304
RT301

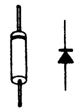
2SC1129



2SC403A

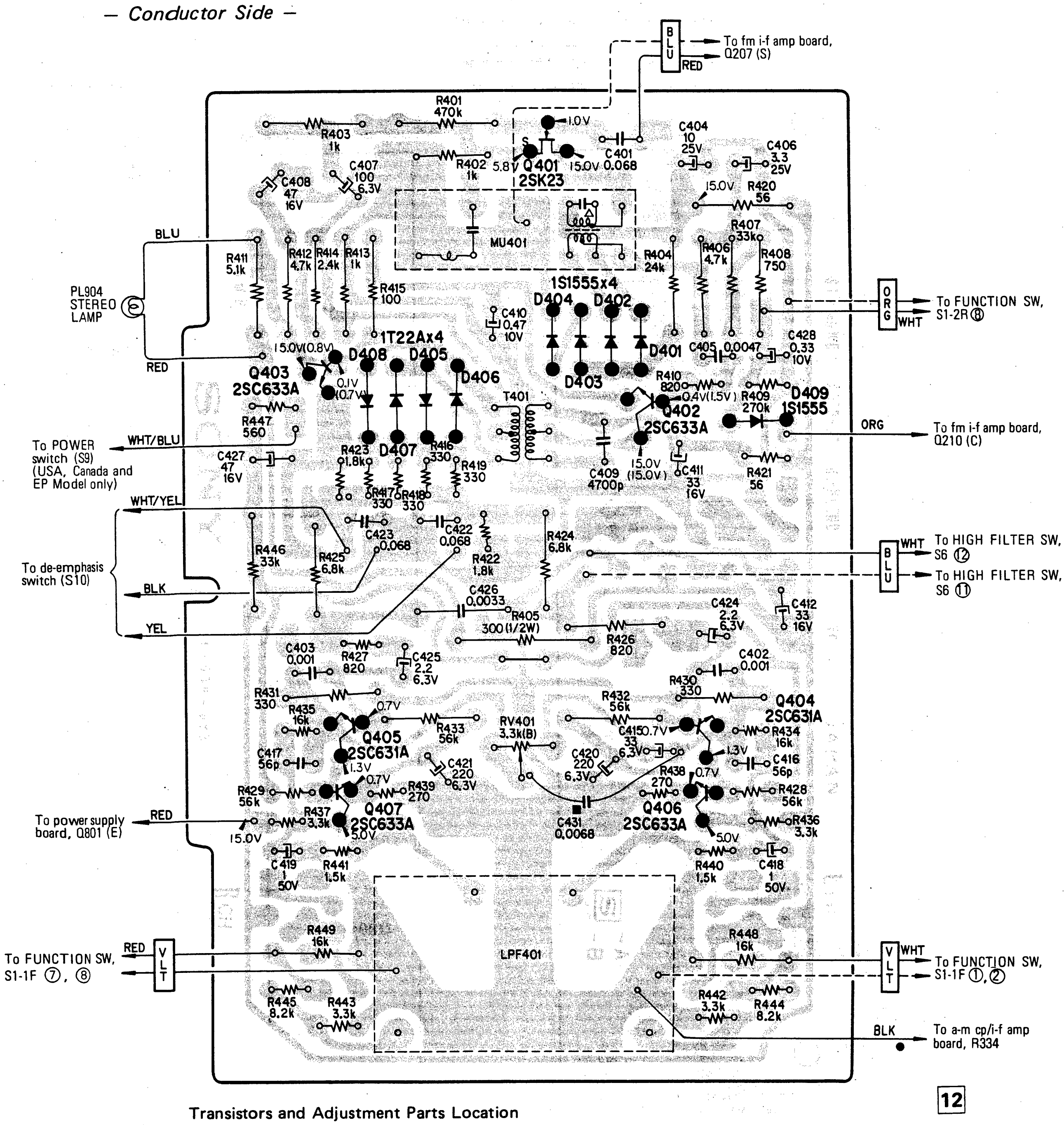


1S1555
1T22A
1T40



5-5. MOUNTING DIAGRAM – MPX Decoder Board –

– Conductor Side –


To fm i-f amp board, Q207 (S)
BLU
RED
R401 470k
R403 1k
R402 1k
5.8V
1.0V
Q401 2SK23
15.0V
C401 0.068
C404 10 25V
C406 3.3 25V
C407 100 6.3V
C408 47 16V
MU401
15.0V
R420 56
R407 33k
R404 24k
R406 4.7k
R408 750
BLU
R411 5.1k
R412 4.7k
R414 2.4k
R413 1k
R415 100
PL904 STEREO LAMP
1S1555x4
D404
D402
C410 0.47 10V
1T22Ax4
D408
D405
D406
D401
D403
C405 0.0047
C428 0.33 10V
To FUNCTION SW, S1-2R ⑧
ORG
WHT
RED
15.0V(0.8V)
Q403 2SC633A
0.1V (0.7V)
R447 560
T401
R410 820
0.4V(1.5V)
R409 270k
D409 1S1555
Q402 2SC633A
ORG
To fm i-f amp board, Q210 (C)
To POWER switch (S9) (USA, Canada and EP Model only)
WHT/BLU
C427 47 16V
R423 1.8k
D407
R416 330
R419 330
R417 330
R418 330
C409 4700p
15.0V (15.0V)
C411 33 16V
R421 56
WHT/YEL
C423 0.068
C422 0.068
R424 6.8k
R446 33k
R425 6.8k
R422 1.8k
To de-emphasis switch (S10)
BLK
YEL
WHT
To HIGH FILTER SW, S6 ⑫
To HIGH FILTER SW, S6 ⑪
C426 0.0033
R405 300 (1/2W)
R426 820
C424 2.2 6.3V
C412 33 16V
C403 0.001
R427 820
C425 2.2 6.3V
C402 0.001
R431 330
R430 330
R435 16k
0.7V
Q405 2SC631A
R433 56k
RV401 3.3k(B)
R432 56k
C415 33 6.3V
0.7V
Q404 2SC631A
R434 16k
C417 56p
1.3V
C421 220 6.3V
C420 220 6.3V
1.3V
C416 56p
R429 56k
0.7V
R439 270
R438 270
0.7V
R428 56k
To power supply board, Q801 (E)
RED
R437 3.3k
Q407 2SC633A
5.0V
C431 0.0068
Q406 2SC633A
5.0V
R436 3.3k
15.0V
C419 1 50V
R441 1.5k
R440 1.5k
C418 1 50V
R449 16k
LPF401
R448 16k
To FUNCTION SW, S1-1F ⑦, ⑧
RED
V L T
V L T
WHT
To FUNCTION SW, S1-1F ①, ②
R445 8.2k
R443 3.3k
R442 3.3k
R444 8.2k
BLK
To a-m cp/i-f amp board, R334
12

Transistors and Adjustment Parts Location

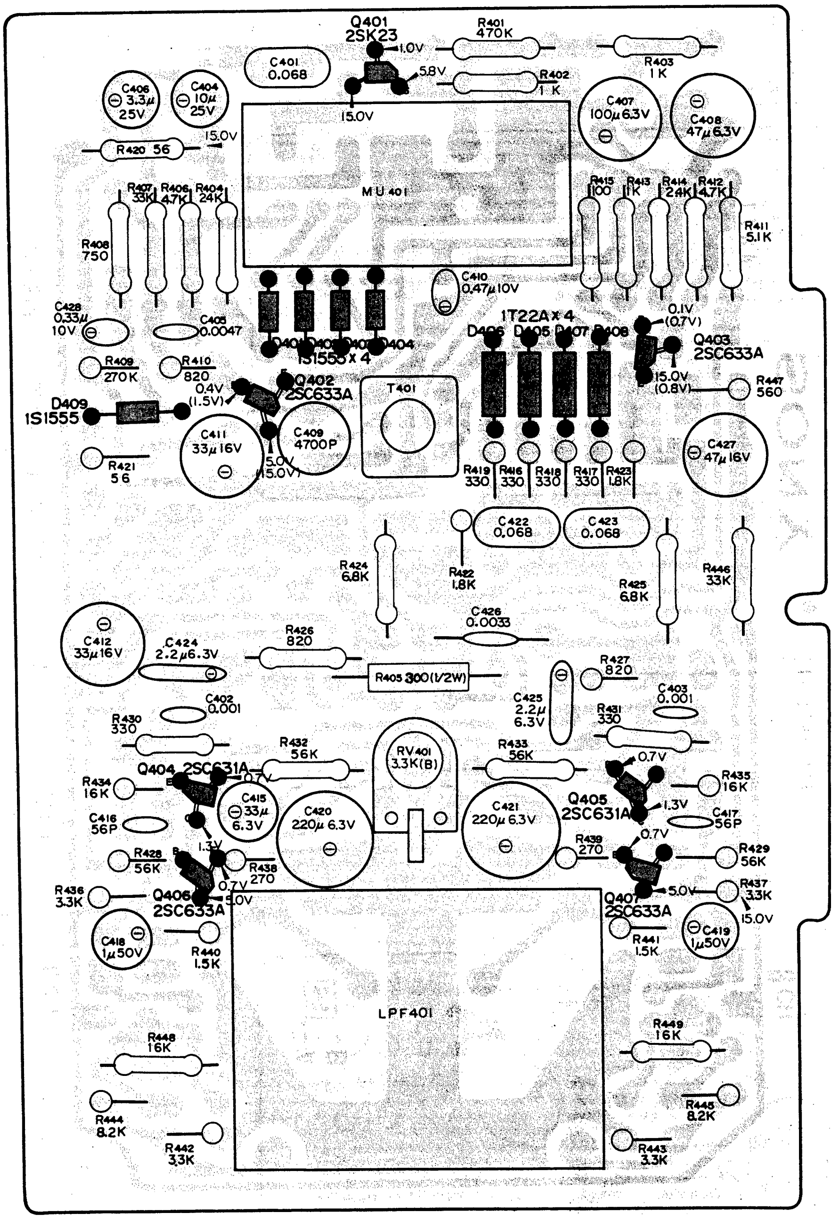
Q403	Q401 T401	Q402
Q405 Q407	RV401	Q404 Q406

Note: Lead wire marked • is applied for the sets with the serial number of
810,401 and later (USA Model)
700,301 and later (Canada Model)
553,001 and later (EP Model)
600,001 and later (UK Model)
900,001 and later (AEP Model).

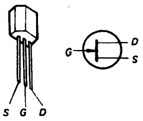
■ C431 is mounted on the conductor side.

( ) Stereo operation

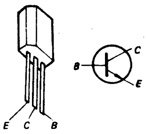
– Component Side –


Q401
2SK23
1.0V
5.8V
15.0V
R401
470K
R402
1K
R403
1K
C401
0.068
C406
3.3μ
25V
C404
10μ
25V
C407
100μ6.3V
C408
47μ6.3V
R420 56
15.0V
MU401
R407 33K
R406 4.7K
R404 24K
R408
750
R415 100
R413 1K
R414 24K
R412 4.7K
R411
5.1K
C410
0.47μ10V
C428
0.33μ
10V
C405
0.0047
D401 D402 D403 D404
1S1555×4
1T22A×4
D405 D406 D407 D408
0.1V
(0.7V)
Q403
2SC633A
15.0V
(0.8V)
R447
560
R409
270K
R410
820
0.4V
(1.5V)
Q402
2SC633A
D409
1S1555
T401
C411
33μ16V
C409
4700P
5.0V
(15.0V)
R421
56
R419 330
R416 330
R418 330
R417 330
R423 1.8K
C427
47μ16V
C422
0.068
C423
0.068
R424
6.8K
R422
1.8K
R425
6.8K
R446
33K
C412
33μ16V
C424
2.2μ6.3V
R426
820
C426
0.0033
R405 300(1/2W)
R427
820
C425
2.2μ
6.3V
C403
0.001
C402
0.001
R430
330
R431
330
R432
56K
RV401
3.3K(B)
R433
56K
Q404 2SC631A
0.7V
0.7V
R434
16K
C415
33μ
6.3V
C420
220μ6.3V
C421
220μ6.3V
R435
16K
Q405
2SC631A
1.3V
C417
56P
C416
56P
0.7V
R439
270
R429
56K
R428
56K
1.3V
R438
270
0.7V
5.0V
R436
3.3K
Q406
2SC633A
5.0V
R437
3.3K
Q407
2SC633A
15.0V
C418
1μ50V
R440
1.5K
R441
1.5K
C419
1μ50V
LPF401
R448
16K
R449
16K
R444
8.2K
R445
8.2K
R442
3.3K
R443
3.3K

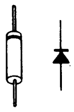
2SK23



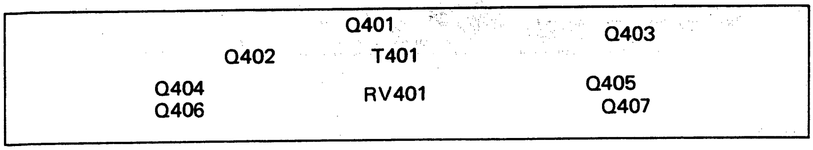
2SC631A
2SC633A



1T22A
1S1555



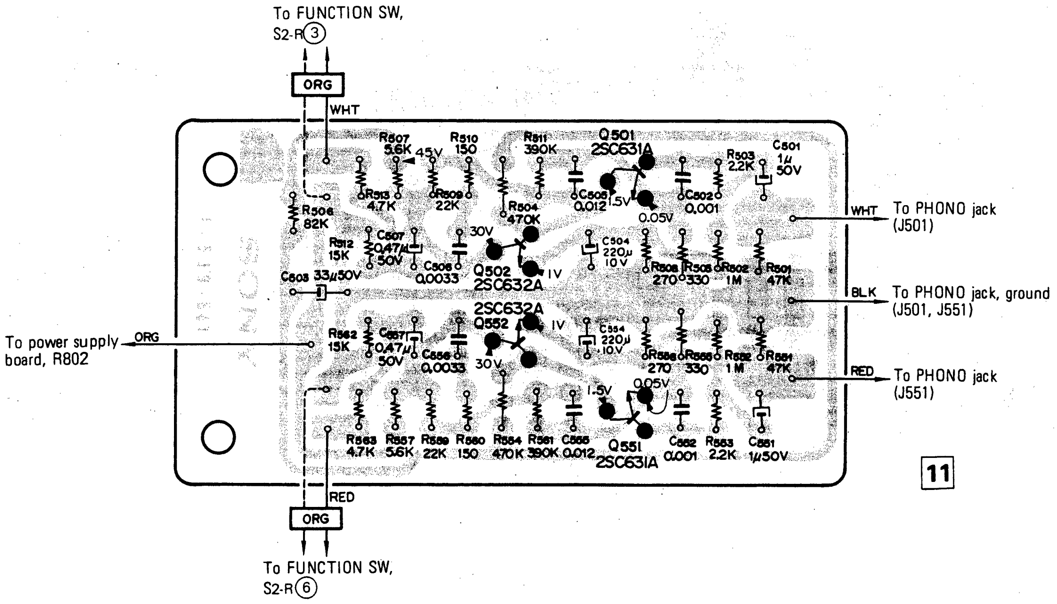
Transistors and Adjustment Parts Location


Q401
Q403
Q402
T401
Q404
Q406
RV401
Q405
Q407

Note: ( ) Stereo operation

5-6. MOUNTING DIAGRAM — Preamplifier Board —

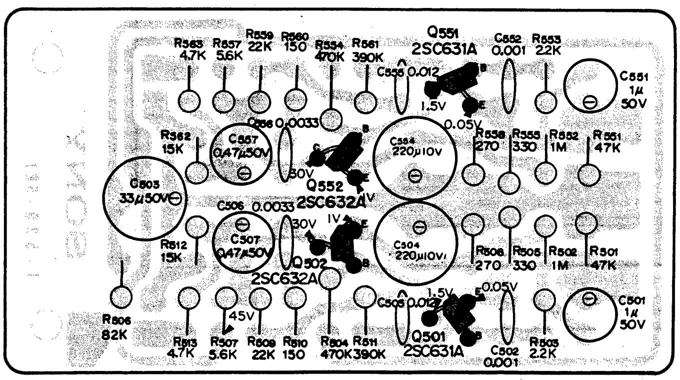
— Conductor Side —


To FUNCTION SW,
S2-R③
ORG
WHT
R507 5.6K
45V
R510 150
R511 390K
Q501 2SC631A
R503 2.2K
C501 1μ 50V
R513 4.7K
R509 22K
R504 470K
C505 0.012
1.5V
0.05V
C502 0.001
R506 82K
R512 15K
C507 0.47μ 50V
C508 0.0033
30V
Q502 2SC632A
1V
C504 220μ 10V
R508 270
R505 330
R502 1M
R501 47K
C503 33μ50V
WHT
To PHONO jack (J501)
BLK
To PHONO jack, ground (J501, J551)
To power supply board, R802
ORG
2SC632A Q552
R562 15K
C557 0.47μ 50V
C556 0.0033
C554 220μ 10V
R558 270
R555 330
R552 1M
R551 47K
RED
To PHONO jack (J551)
0.05V
1.5V
R563 4.7K
R557 5.6K
R559 22K
R560 150
R554 470K
R561 390K
C555 0.012
Q551 2SC631A
C552 0.001
R553 2.2K
C551 1μ50V
11
RED
ORG
To FUNCTION SW,
S2-R⑥

Transistor Location

Q501
Q502
Q552
Q551

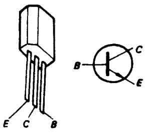
— Component Side —


R563 4.7K
R557 5.6K
R559 22K
R560 150
R554 470K
R561 390K
Q551 2SC631A
C552 0.001
R553 2.2K
C555 0.012
C551 1μ 50V
1.5V
0.05V
R562 15K
C556 0.0033
C557 0.47μ50V
C554 220μ10V
R558 270
R555 330
R552 1M
R551 47K
C503 33μ50V
30V
Q552 2SC632A
1V
C506 0.0033
C507 0.47μ50V
R512 15K
C504 220μ10V
R508 270
R505 330
R502 1M
R501 47K
Q502 2SC632A
45V
R506 82K
R513 4.7K
R507 5.6K
R509 22K
R510 150
R504 470K
R511 390K
C505 0.012
Q501 2SC631A
C502 0.001
R503 2.2K
C501 1μ 50V

Transistor Location

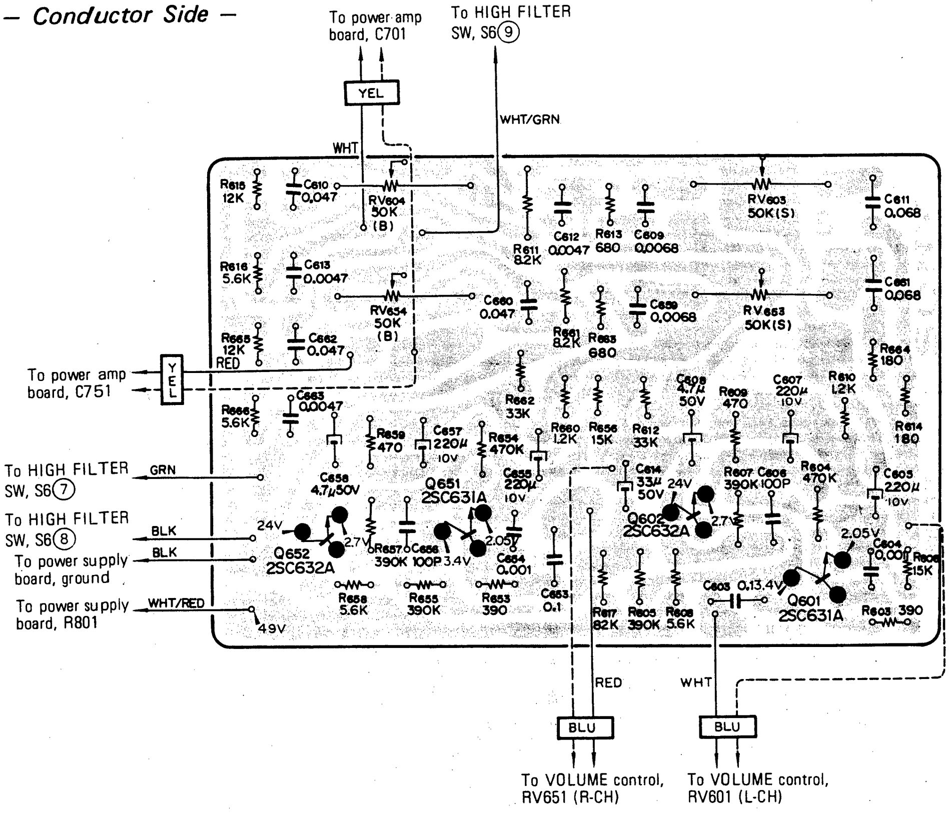
Q551
Q552
Q502
Q501

2SC631A
2SC632A



5-7. MOUNTING DIAGRAM – Tone Control Board –

– *Conductor Side* –

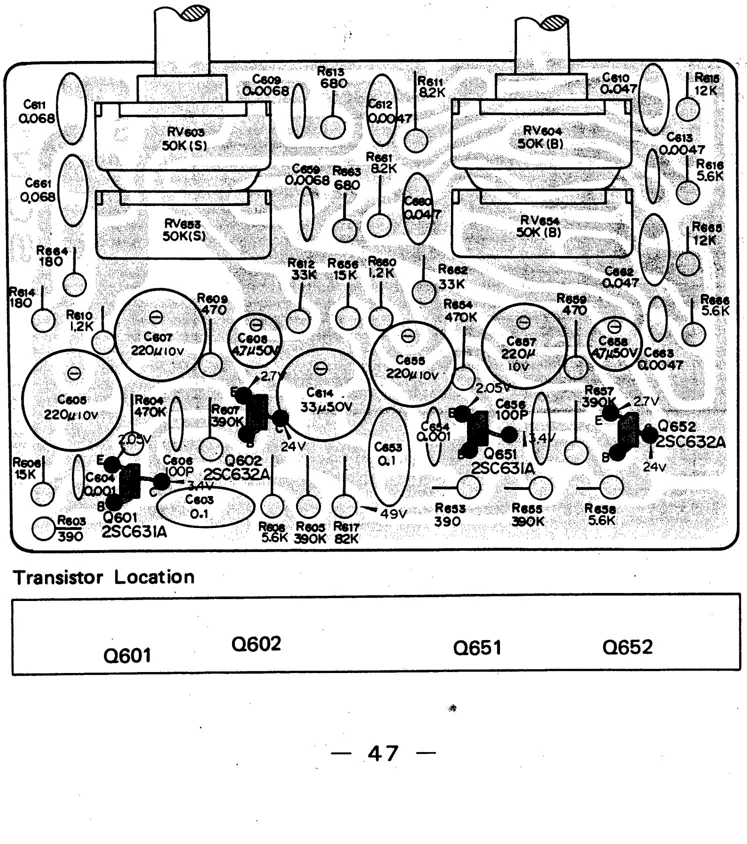

To power amp board, C701
To HIGH FILTER SW, S6⑨
YEL
WHT
WHT/GRN
R615 12K
C610 0.047
RV604 50K (B)
RV603 50K(S)
C611 0.068
R611 8.2K
C612 0.0047
R613 680
C609 0.0068
R616 5.6K
C613 0.0047
RV654 50K (B)
C660 0.047
R661 8.2K
R663 680
C659 0.0068
RV653 50K(S)
C661 0.068
R665 12K
C662 0.047
RED
R664 180
To power amp board, C751
Y E L
C663 0.0047
R666 5.6K
R662 33K
R660 1.2K
R656 15K
R612 33K
C608 4.7μ 50V
R609 470
C607 220μ 10V
R610 1.2K
R614 180
R659 470
C657 220μ 10V
R654 470K
To HIGH FILTER SW, S6⑦
GRN
C658 4.7μ50V
Q651 2SC631A
C655 220μ 10V
C614 33μ 50V
24V
R607 390K
C606 100P
R604 470K
C605 220μ 10V
To HIGH FILTER SW, S6⑧
BLK
24V
2.7V
Q602 2SC632A
2.7V
2.05V
C604 0.001
R606 15K
To power supply board, ground
BLK
Q652 2SC632A
R657 390K
C656 100P
3.4V
2.05V
C654 0.001
C603 0.1
3.4V
Q601 2SC631A
To power supply board, R801
WHT/RED
49V
R658 5.6K
R655 390K
R653 390
C653 0.1
R617 82K
R605 390K
R608 5.6K
R603 390
RED
WHT
BLU
BLU
To VOLUME control, RV651 (R-CH)
To VOLUME control, RV601 (L-CH)

11

Transistor Location

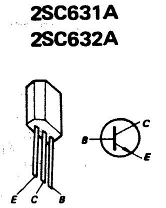
Q652 Q651 Q602 Q601

– *Component Side* –


C611 0.068
C609 0.0068
R613 680
R611 8.2K
C610 0.047
R615 12K
RV603 50K(S)
C612 0.0047
RV604 50K (B)
C613 0.0047
R616 5.6K
C661 0.068
C659 0.0068
R663 680
R661 8.2K
C660 0.047
RV653 50K(S)
RV654 50K (B)
R665 12K
R664 180
R612 33K
R656 15K
R660 1.2K
R662 33K
C662 0.047
R614 180
R610 1.2K
R609 470
C607 220μ10V
C608 47μ50V
R654 470K
R659 470
C657 220μ 10V
C658 47μ50V
C663 0.0047
R666 5.6K
C606 220μ10V
R604 470K
R607 390K
2.7V
C614 33μ50V
C655 220μ10V
2.05V
C656 100P
R657 390K
2.7V
Q652 2SC632A
2.05V
C606 100P
Q602 2SC632A
24V
C654 0.001
Q651 2SC631A
3.4V
24V
R606 15K
C604 0.001
3.4V
C603 0.1
C653 0.1
49V
Q601 2SC631A
R603 390
R608 5.6K
R605 390K
R617 82K
R653 390
R655 390K
R658 5.6K
E
B
C

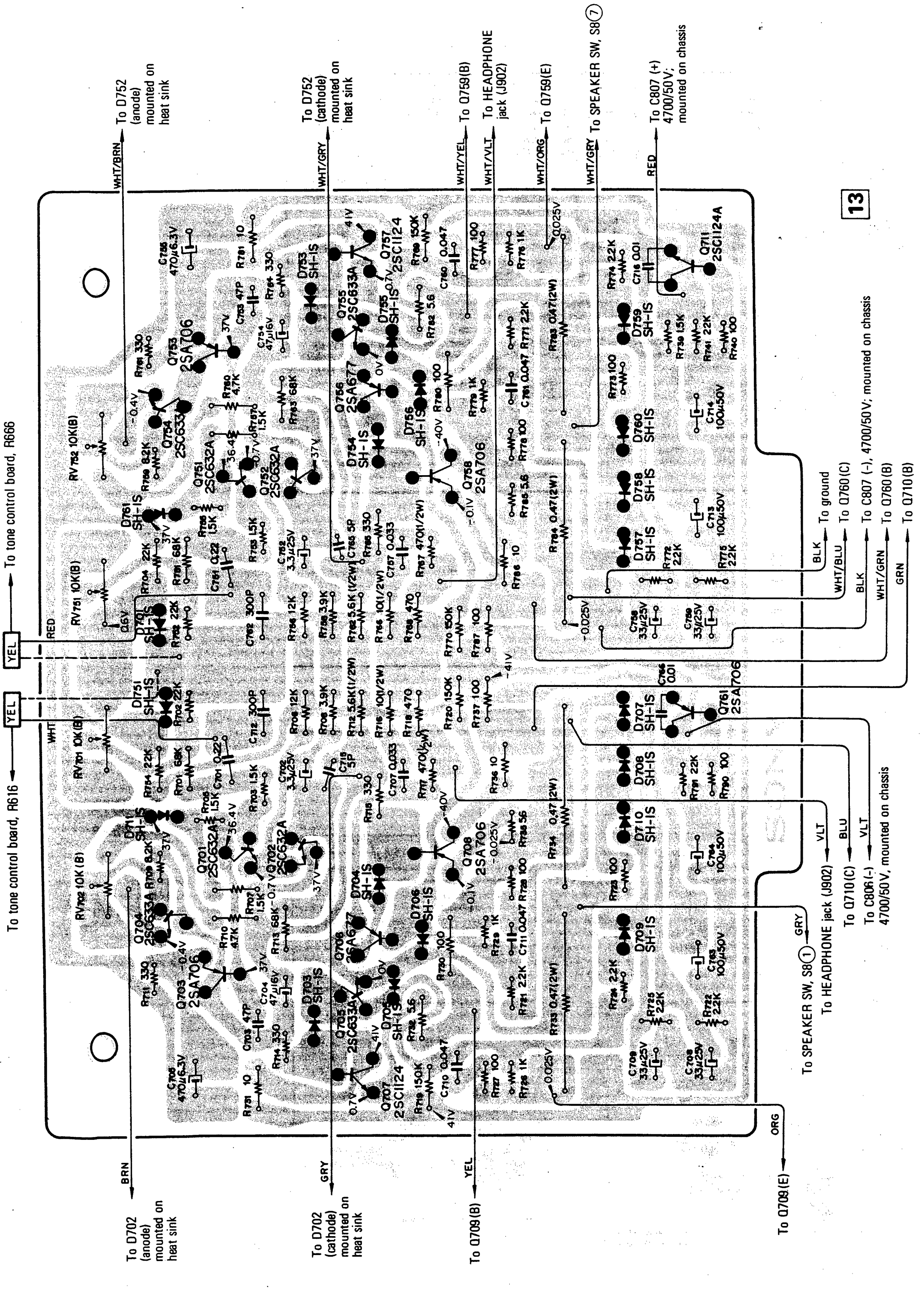
Transistor Location

Q601 Q602 Q651 Q652

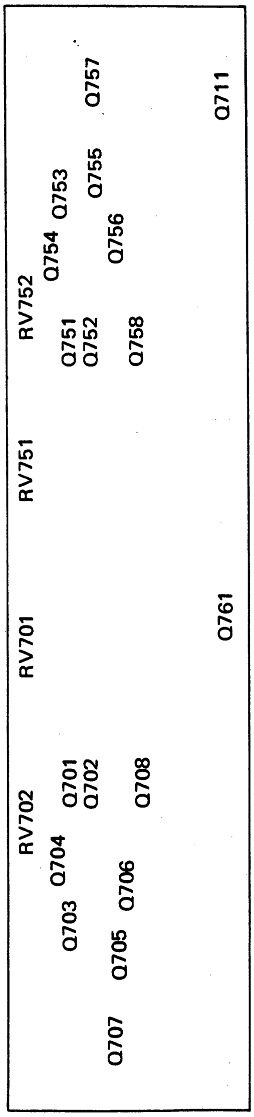

2SC631A
2SC632A
B
C
E
E C B

5-8. MOUNTING DIAGRAM — Power Amplifier Board —

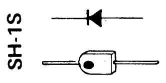
— Conductor Side —

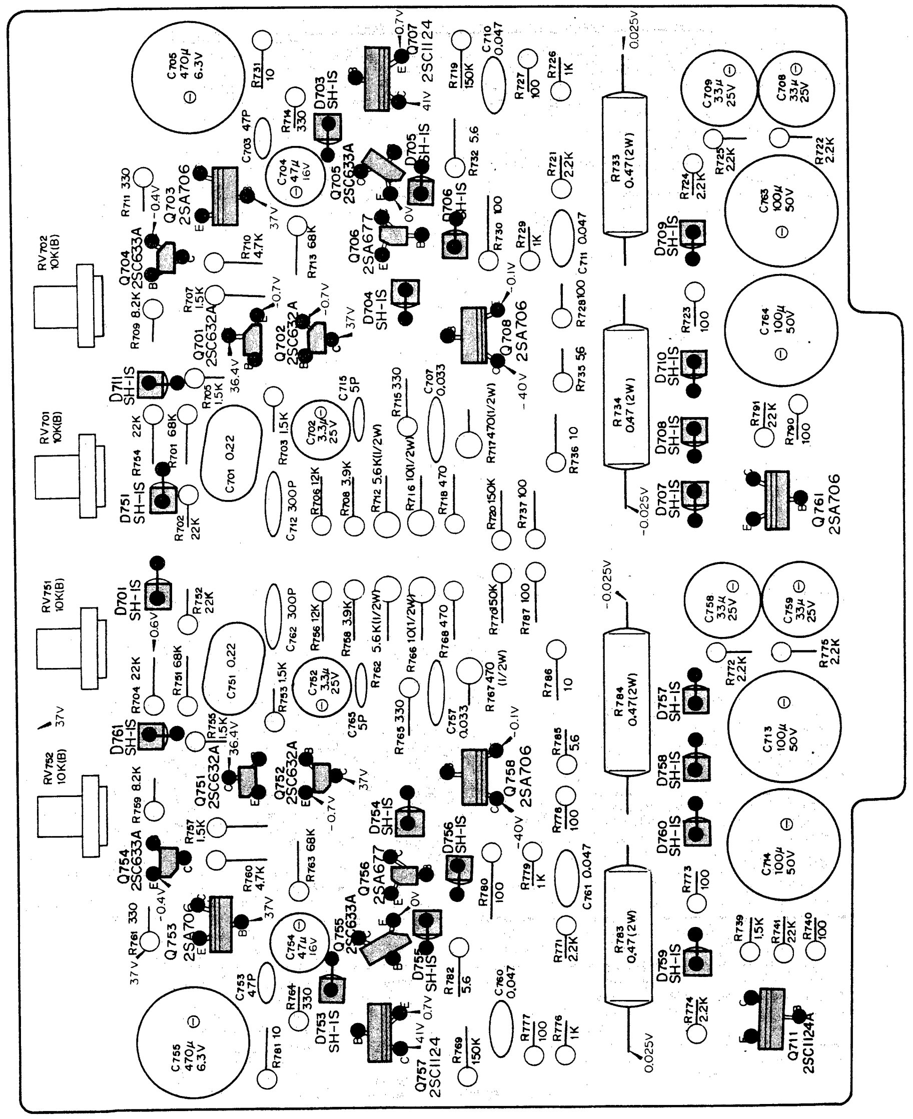

To D752 (anode) mounted on heat sink
WHT/BRN
To D752 (cathode) mounted on heat sink
WHT/GRY
WHT/YEL
To Q759(B)
WHT/VLT
To HEADPHONE jack (J902)
WHT/ORG
To Q759(E)
WHT/GRY
To SPEAKER SW, S8⑦
RED
To C807 (+) 4700/50V; mounted on chassis
13
To tone control board, R666
To tone control board, R616
RED
YEL
WHT
YEL
BLK
To ground
WHT/BLU
To Q760(C)
BLK
To C807 (-), 4700/50V; mounted on chassis
WHT/GRN
To Q760(B)
GRN
To Q710(B)
VLT
BLU
VLT
GRY
To SPEAKER SW, S8①
To HEADPHONE jack (J902)
To Q710(C)
To C806(-) 4700/50V, mounted on chassis
BRN
To D702 (anode) mounted on heat sink
GRY
To D702 (cathode) mounted on heat sink
YEL
To Q709(B)
ORG
To Q709(E)
Q701 2SC632A
Q702 2SC632A
Q703 2SA706
Q704 2SC633A
Q705 2SC633A
Q706 2SA677
Q707 2SC1124
Q708 2SA706
Q711 2SC1124A
Q751 2SC632A
Q752 2SC632A
Q753 2SA706
Q754 2SC633
Q755 2SC633A
Q756 2SA677
Q757 2SC1124
Q758 2SA706
Q761 2SA706
D701 SH-1S
D703 SH-1S
D704 SH-1S
D705 SH-1S
D706 SH-1S
D707 SH-1S
D708 SH-1S
D709 SH-1S
D710 SH-1S
D711 SH-1S
D751 SH-1S
D753 SH-1S
D754 SH-1S
D755 SH-1S
D756 SH-1S
D757 SH-1S
D758 SH-1S
D759 SH-1S
D760 SH-1S
D761 SH-1S
RV701 10K(B)
RV702 10K(B)
RV751 10K(B)
RV752 10K(B)
-0.4V
37V
36.4V
0.7V
41V
0V
-40V
-0.1V
-0.025V
0.025V
-41V
0.6V

Transistors and Adjustment Parts Location


RV752
RV751
RV701
RV702
Q754
Q753
Q757
Q755
Q756
Q751
Q752
Q758
Q711
Q761
Q704
Q701
Q702
Q703
Q706
Q708
Q705
Q707

— Component Side —

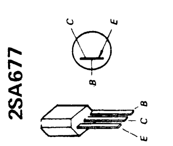



RV702 10K(B)
RV701 10K(B)
RV751 10K(B)
RV752 10K(B)
Q701 2SC632A
Q702 2SC632A
Q703 2SA706
Q704 2SC633A
Q705 2SC633A
Q706 2SA677
Q707 2SC1124
Q708 2SA706
Q711 2SC1124A
Q751 2SC632A
Q752 2SC632A
Q753 2SA706
Q754 2SC633A
Q755 2SC633A
Q756 2SA677
Q757 2SC1124
Q758 2SA706
Q761 2SA706
D701 SH-1S
D703 SH-1S
D704 SH-1S
D705 SH-1S
D706 SH-1S
D707 SH-1S
D708 SH-1S
D709 SH-1S
D710 SH-1S
D711 SH-1S
D751 SH-1S
D754 SH-1S
D755 SH-1S
D756 SH-1S
D757 SH-1S
D758 SH-1S
D759 SH-1S
D760 SH-1S
D761 SH-1S
C706 470μ 6.3V
C755 470μ 6.3V
C708 33μ 25V
C709 33μ 25V
C758 33μ 25V
C759 33μ 25V
C763 100μ 50V
C764 100μ 50V
C713 100μ 50V
C714 100μ 50V
R733 0.47(2W)
R734 0.47(2W)
R783 0.47(2W)
R784 0.47(2W)
37V
-0.4V
36.4V
0.1V
-40V
-0.025V
0.025V

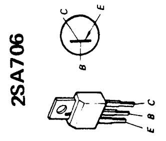
Transistors and Adjustment Parts Location

RV752 RV751 RV701 RV702
Q753 Q754 Q751 Q701 Q704 Q703
Q755 Q752 Q702 Q706 Q705 Q707
Q757 Q756 Q758 Q708
Q711 Q761

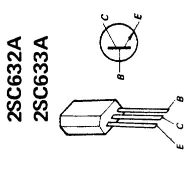
2SA677



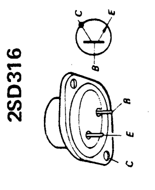
2SA706



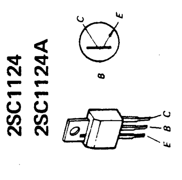
2SC632A
2SC633A



2SD316

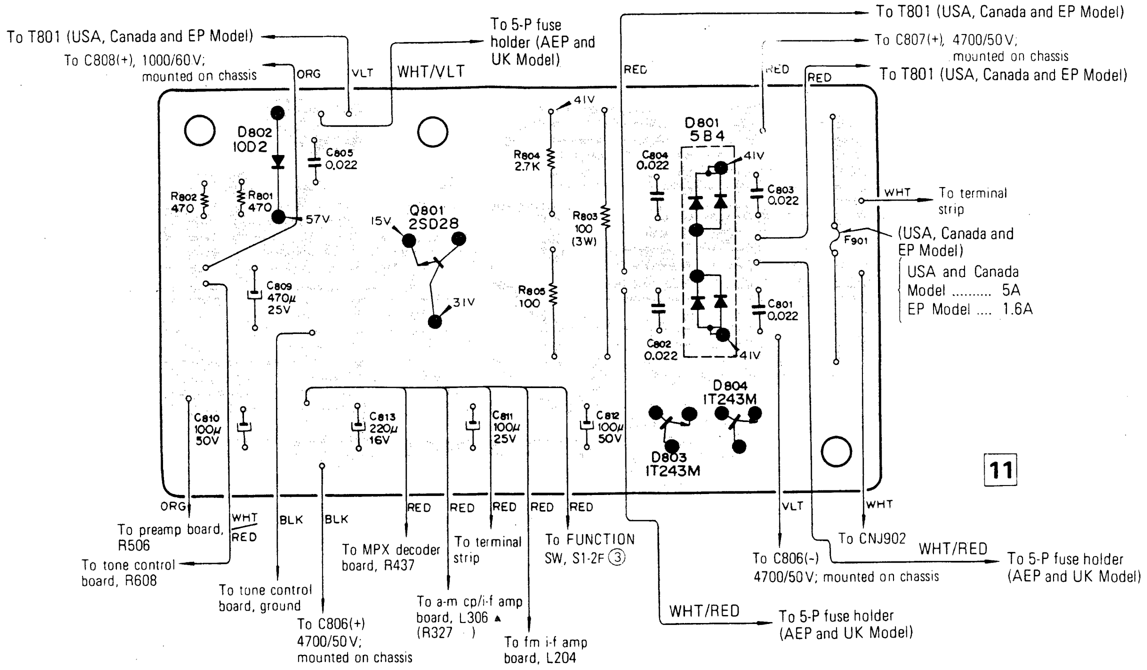


2SC1124
2SC1124A



5-9. MOUNTING DIAGRAM — Power Supply Board —

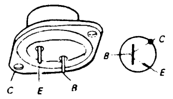
— Conductor Side —


To T801 (USA, Canada and EP Model)
To C808(+), 1000/60V; mounted on chassis
ORG
VLT
WHT/VLT
To 5-P fuse holder (AEP and UK Model)
RED
To T801 (USA, Canada and EP Model)
To C807(+), 4700/50V; mounted on chassis
RED
RED
To T801 (USA, Canada and EP Model)
D802 10D2
C805 0.022
R802 470
R801 470
57V
Q801 2SD28
15V
31V
41V
R804 2.7K
R803 100 (3W)
R805 100
C804 0.022
D801 5B4
41V
C803 0.022
C802 0.022
C801 0.022
WHT
To terminal strip
F901
(USA, Canada and EP Model)
USA and Canada Model 5A
EP Model 1.6A
C809 470μ 25V
C810 100μ 50V
C813 220μ 16V
C811 100μ 25V
C812 100μ 50V
D804 1T243M
D803 1T243M
11
ORG
WHT
RED
BLK
BLK
RED
RED
RED
RED
VLT
WHT
To preamp board, R506
To tone control board, R608
To tone control board, ground
To C806(+) 4700/50V; mounted on chassis
To MPX decoder board, R437
To terminal strip
To a-m cp/i-f amp board, L306 ▲ (R327 ○)
To fm i-f amp board, L204
To FUNCTION SW, S1-2F ③
WHT/RED
To 5-P fuse holder (AEP and UK Model)
To C806(-) 4700/50V; mounted on chassis
To CNJ902
WHT/RED
To 5-P fuse holder (AEP and UK Model)

Transistor Location

Q801

2SD28



Note:

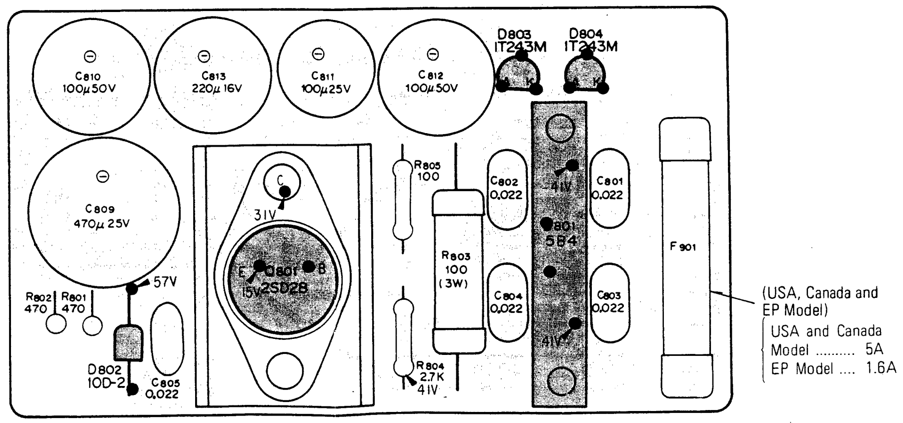
▲

USA Model............	Serial No. 810,401 and later
Canada Model	Serial No. 700,301 and later
EP Model	Serial No. 553,001 and later

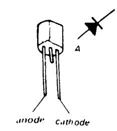
○

USA Model............	Serial No. 810,401 and later
Canada Model	Serial No. 700,301 and later
EP Model	Serial No. 553,001 and later
UK Model	Serial No. 600,001 and later
AEP Model............	Serial No. 900,001 and later

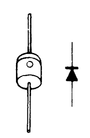
— Component Side —


C810 100μ 50V
C813 220μ 16V
C811 100μ 25V
C812 100μ 50V
D803 1T243M
D804 1T243M
C809 470μ 25V
R805 100
C802 0.022
C801 0.022
31V
Q801 2SD28
15V
R803 100 (3W)
C804 0.022
C803 0.022
D801 5B4
41V
F901
57V
R802 470
R801 470
D802 10D-2
C805 0.022
R804 2.7K
41V
(USA, Canada and EP Model)
USA and Canada Model 5A
EP Model 1.6A

1T243M


anode
cathode

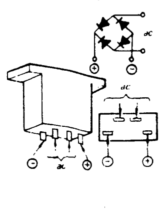
10D-2



Transistor Location

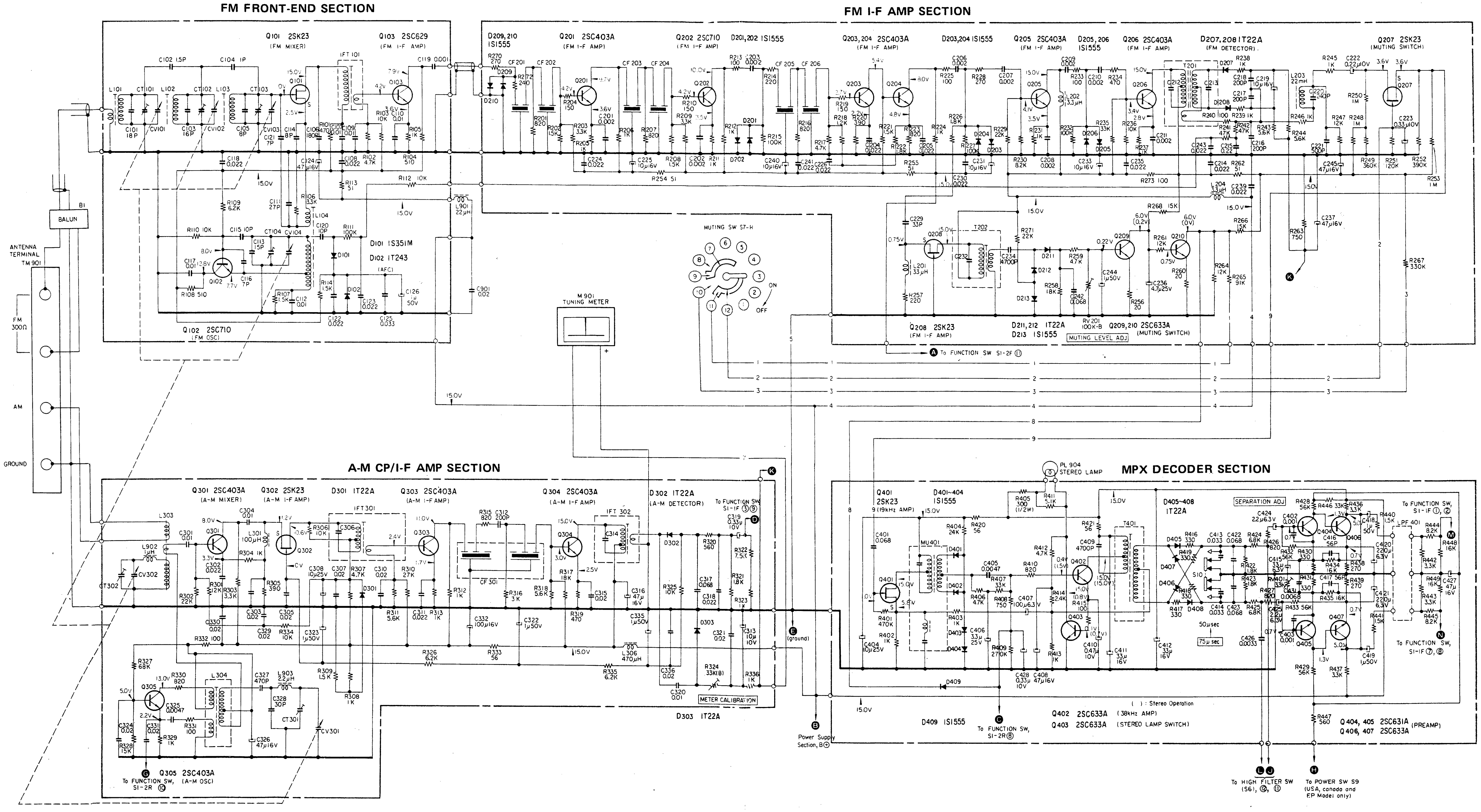
Q801

5B4

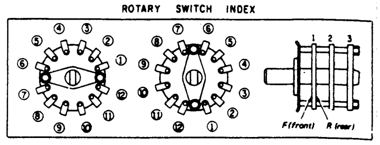


5-10. SCHEMATIC DIAGRAM – Tuner Section –

Applicable Serial Numbers:
USA Model ...... Up to 810,400
Canada Model ... Up to 700,300
EP Model .... Up to 553,000


FM FRONT-END SECTION
FM I-F AMP SECTION
A-M CP/I-F AMP SECTION
MPX DECODER SECTION
Q101 2SK23 (FM MIXER)
Q103 2SC629 (FM I-F AMP)
Q102 2SC710 (FM OSC)
D101 1S351M
D102 1T243 (AFC)
D209, 210 1S1555
Q201 2SC403A (FM I-F AMP)
Q202 2SC710 (FM I-F AMP)
D201, 202 1S1555
Q203, 204 2SC403A (FM I-F AMP)
D203, 204 1S1555
Q205 2SC403A (FM I-F AMP)
D205, 206 1S1555
Q206 2SC403A (FM I-F AMP)
D207, 208 1T22A (FM DETECTOR)
Q207 2SK23 (MUTING SWITCH)
Q208 2SK23 (FM I-F AMP)
D211, 212 1T22A
D213 1S1555
Q209, 210 2SC633A (MUTING SWITCH)
MUTING LEVEL ADJ
MUTING SW S7-H
ON
OFF
M901 TUNING METER
BALUN
ANTENNA TERMINAL TM901
FM 300Ω
AM
GROUND
To FUNCTION SW S1-2F ⓖ
Q301 2SC403A (A-M MIXER)
Q302 2SK23 (A-M I-F AMP)
D301 1T22A
Q303 2SC403A (A-M I-F AMP)
Q304 2SC403A (A-M I-F AMP)
D302 1T22A (A-M DETECTOR)
D303 1T22A
Q305 2SC403A (A-M OSC)
To FUNCTION SW, S1-2R ⓚ
METER CALIBRATION
(ground)
Power Supply Section, B
PL904 STEREO LAMP
Q401 2SK23 (19kHz AMP)
D401-404 1S1555
D405-408 1T22A
SEPARATION ADJ
To FUNCTION SW, S1-1F ①, ②
To FUNCTION SW, S1-1F ⑦, ⑧
To FUNCTION SW, S1-2R ⑧
D409 1S1555
Q402 2SC633A (38kHz AMP)
Q403 2SC633A (STEREO LAMP SWITCH)
Q404, 405 2SC631A (PREAMP)
Q406, 407 2SC633A
( ) : Stereo Operation
To HIGH FILTER SW (S6), ⑫, ⑬
To POWER SW S9 (USA, canada and EP Model only)

Ref. No.	Function	Position
S7	MUTING SW	ON
S10	DE-EMPHASIS SW (50 μsec – 75 μsec)	75 μsec


ROTARY SWITCH INDEX
F(front)
R(rear)

Note:

All resistance values are in ohms. k = 1,000, M = 1,000k

All capacitance values are in μF except as indicated with p, which means $\mu\mu$F.

All voltages are dc measured with a VOM which has an input impedance of 20k ohms/volt. No signal in.

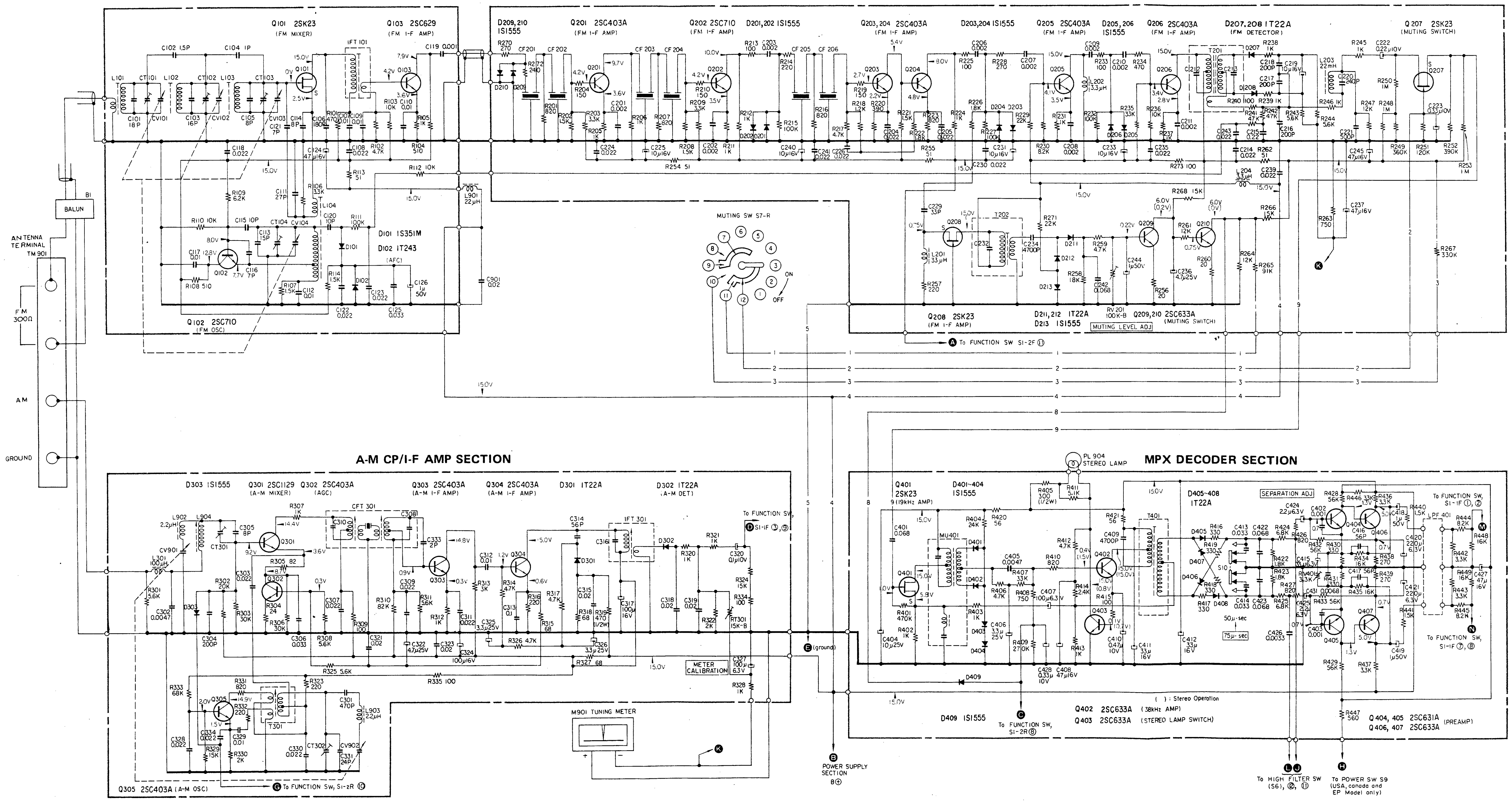
All voltages represent an average value.

( ) : Stereo operation

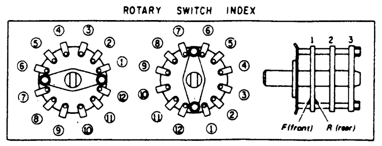
[ ] : Muting operation

SCHEMATIC DIAGRAM – Tuner Section –

Applicable Serial Numbers:
USA Model ...... 810,401 and later
Canada Model... 700,301 and later
EP Model .... 553,001 and later
UK Model......... 600,001 and later
AEP Model ...... 900,001 and later


FM FRONT-END SECTION
FM I-F AMP SECTION
Q101 2SK23 (FM MIXER)
Q103 2SC629 (FM I-F AMP)
Q102 2SC710 (FM OSC)
IFT 101
D101 1S351M
D102 1T243 (AFC)
B1 BALUN
ANTENNA TERMINAL TM901
FM 300Ω
AM
GROUND
D209, 210 1S1555
Q201 2SC403A (FM I-F AMP)
Q202 2SC710 (FM I-F AMP)
D201, 202 1S1555
Q203, 204 2SC403A (FM I-F AMP)
D203, 204 1S1555
Q205 2SC403A (FM I-F AMP)
D205, 206 1S1555
Q206 2SC403A (FM I-F AMP)
D207, 208 1T22A (FM DETECTOR)
Q207 2SK23 (MUTING SWITCH)
MUTING SW S7-R
ON
OFF
Q208 2SK23 (FM I-F AMP)
D211, 212 1T22A
D213 1S1555
RV201 100K-B
MUTING LEVEL ADJ
Q209, 210 2SC633A (MUTING SWITCH)
To FUNCTION SW S1-2F
A-M CP/I-F AMP SECTION
D303 1S1555
Q301 2SC1129 (A-M MIXER)
Q302 2SC403A (AGC)
CFT 301
Q303 2SC403A (A-M I-F AMP)
Q304 2SC403A (A-M I-F AMP)
D301 1T22A
D302 1T22A (A-M DET)
IFT 301
To FUNCTION SW S1-IF
METER CALIBRATION
RT301 15K-B
M901 TUNING METER
T301
Q305 2SC403A (A-M OSC)
To FUNCTION SW, S1-2R
(ground)
POWER SUPPLY SECTION B⊕
PL 904 STEREO LAMP
MPX DECODER SECTION
Q401 2SK23 9 (19kHz AMP)
D401-404 1S1555
MU401
D405-408 1T22A
T401
SEPARATION ADJ
S10
50μ-sec
75μ-sec
D409
D409 1S1555
To FUNCTION SW, S1-2R
Q402 2SC633A (38kHz AMP)
Q403 2SC633A (STEREO LAMP SWITCH)
Q404, 405 2SC631A (PREAMP)
Q406, 407 2SC633A
To FUNCTION SW, S1-IF
To HIGH FILTER SW (S6)
To POWER SW S9 (USA, canada and EP Model only)
( ) : Stereo Operation

Ref. No.	Function	Position
S7	MUTING SW	ON
S10	DE-EMPHASIS SW (50 μsec – 75 μsec)	75 μsec


ROTARY SWITCH INDEX
F(front)
R(rear)

Note:

All resistance values are in ohms. k = 1,000, M = 1,000k

All capacitance values are in μF except as indicated with p, which means μμF.

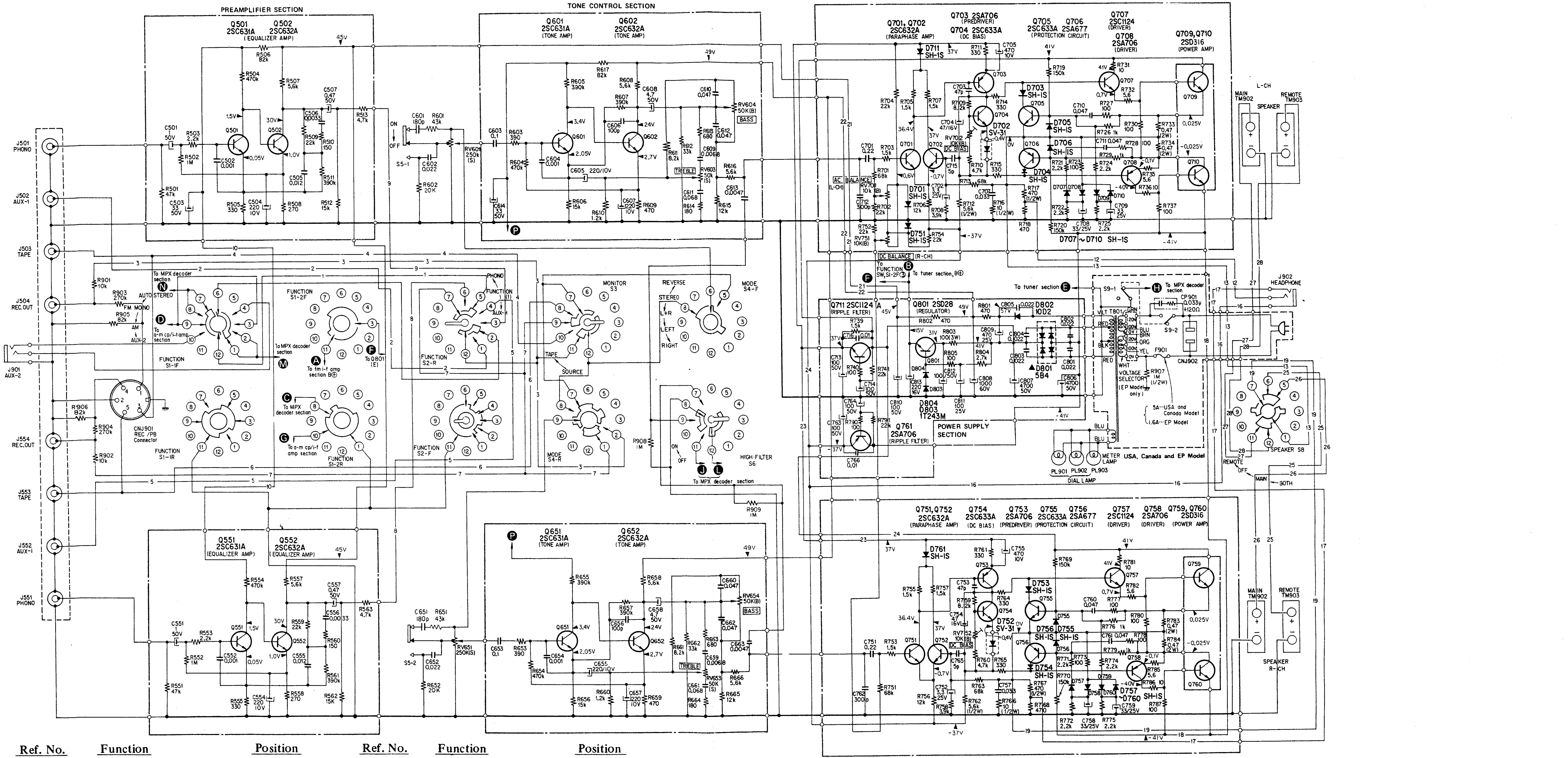
All voltages are dc measured with a VOM which has an input impedance of 20k ohms/volt. No signal in.

All voltages represent an average value.

( ) : Stereo operation

[ ] : Muting operation

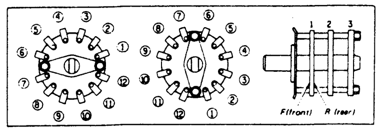
5-11. SCHEMATIC DIAGRAM – Audio Amp Section –


PREAMPLIFIER SECTION
Q501 Q502 2SC631A 2SC632A (EQUALIZER AMP)
TONE CONTROL SECTION
Q601 2SC631A (TONE AMP)
Q602 2SC632A (TONE AMP)
POWER AMPLIFIER SECTION
Q701, Q702 2SC632A (PARAPHASE AMP)
Q703 2SA706 (PREDRIVER)
Q704 2SC633A (DC BIAS)
Q705 Q706 2SC633A 2SA677 (PROTECTION CIRCUIT)
Q707 2SC1124 (DRIVER)
Q708 2SA706 (DRIVER)
Q709, Q710 2SD316 (POWER AMP)
J501 PHONO
J502 AUX-1
J503 TAPE
J504 REC.OUT
J901 AUX-2
J554 REC.OUT
J553 TAPE
J552 AUX-1
J551 PHONO
FUNCTION S1-2F
FUNCTION S1-1F
FUNCTION S1-1R
FUNCTION S1-2R
FUNCTION S2-R
FUNCTION S2-F
MONITOR S3
MODE S4-F
MODE S4-R
HIGH-FILTER S6
REVERSE STEREO L+R LEFT RIGHT
Q711 2SC1124 (RIPPLE FILTER)
Q801 2SD28 (REGULATOR)
Q761 2SA706 (RIPPLE FILTER)
POWER SUPPLY SECTION
To tuner section
To MPX decoder section
METER LAMP USA, Canada and EP Model
DIAL LAMP
PL901 PL902 PL903
MAIN TM902
REMOTE TM903
L-CH SPEAKER
R-CH SPEAKER
J902 HEADPHONE
SPEAKER S8
REMOTE OFF MAIN BOTH
VOLTAGE SELECTOR (EP Model only)
5A···USA and Canada Model
1.6A···EP Model
Q551 2SC631A (EQUALIZER AMP)
Q552 2SC632A (EQUALIZER AMP)
Q651 2SC631A (TONE AMP)
Q652 2SC632A (TONE AMP)
Q751, Q752 2SC632A (PARAPHASE AMP)
Q754 2SC633A (DC BIAS)
Q753 2SA706 (PREDRIVER)
Q755 Q756 2SC633A 2SA677 (PROTECTION CIRCUIT)
Q757 2SC1124 (DRIVER)
Q758 2SA706 (DRIVER)
Q759, Q760 2SD316 (POWER AMP)
BASS
TREBLE
DC BALANCE
AC BALANCE

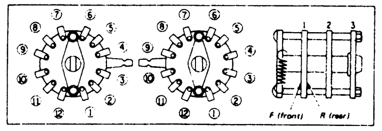
Ref. No.	Function	Position
S1-1~2	FUNCTION (1) SW (AUTO STEREO - MONO - AM - AUX-2)	AUTO STEREO
S2	FUNCTION (2) SW (AUX-1 - FUNCTION (1) - PHONO)	FUNCTION (1)
S3	MONITOR SW (SOURCE - TAPE)	SOURCE
S4	MODE SW (REVERSE - STEREO - L+R - LEFT - RIGHT)	STEREO

Ref. No.	Function	Position
S5-1~2	LOUDNESS SW	ON
S6	HIGH FILTER SW	OFF
S8	SPEAKER SW (REMOTE - OFF - MAIN - BOTH)	BOTH
S9-1~2	POWER SW	OFF

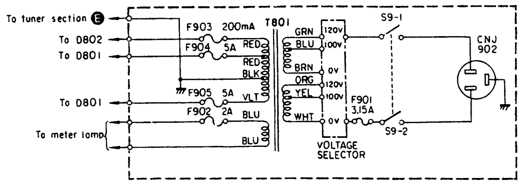
ROTARY SWITCH INDEX


F(front)
R(rear)

LEVER SWITCH INDEX


F(front)
R(rear)

AEP and UK Model


To tuner section E
To D802
To D801
To D801
To meter lamp
F903 200mA
F904 5A
F905 5A
F902 2A
T801
F901 3.15A
S9-1
S9-2
CNJ 902
VOLTAGE SELECTOR

Note:

All resistance values are in ohms. k = 1,000, M = 1,000k

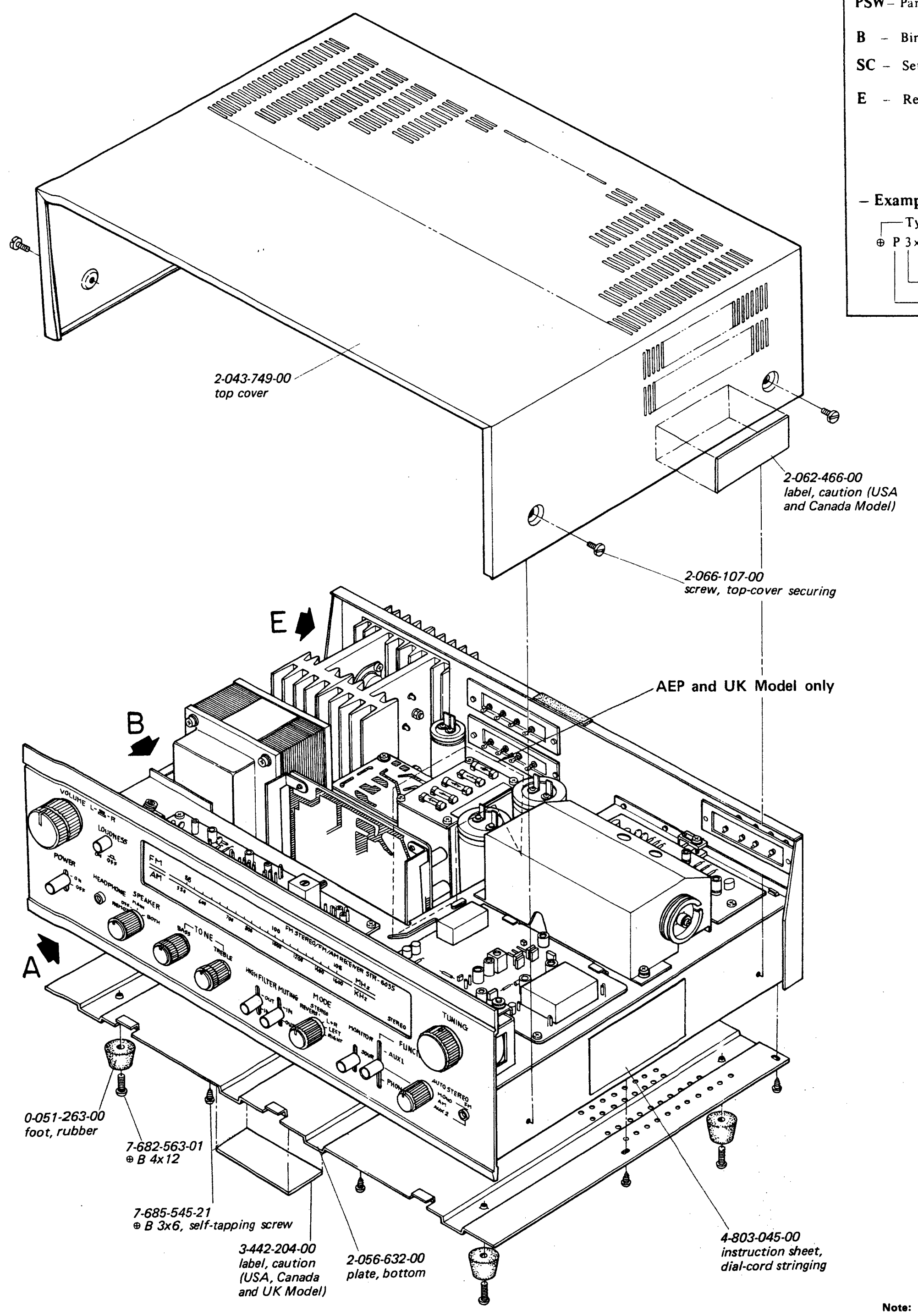
All capacitance values are in μF except as indicated with p, which means $\mu\mu$F.

All voltages are dc measured with a VOM which has an input impedance of 20k ohms/volt. No signal in.

All voltages represent an average value.

SECTION 6
EXPLODED VIEWS

(1)


2-043-749-00
top cover
2-062-466-00
label, caution (USA
and Canada Model)
2-066-107-00
screw, top-cover securing
E
AEP and UK Model only
B
A
0-051-263-00
foot, rubber
7-682-563-01
⊕ B 4x12
7-685-545-21
⊕ B 3x6, self-tapping screw
3-442-204-00
label, caution
(USA, Canada
and UK Model)
2-056-632-00
plate, bottom
4-803-045-00
instruction sheet,
dial-cord stringing

— Hardware Nomenclature —

P – Pan Head Screw ....

PS – Pan Head Screw with Spring Washer ....

PSW – Pan Head Screw with Spring Washer and Washer ....

B – Binding Head Screw ....

SC – Set Screw .... ⊖

E – Retaining Ring (E Washer) ......

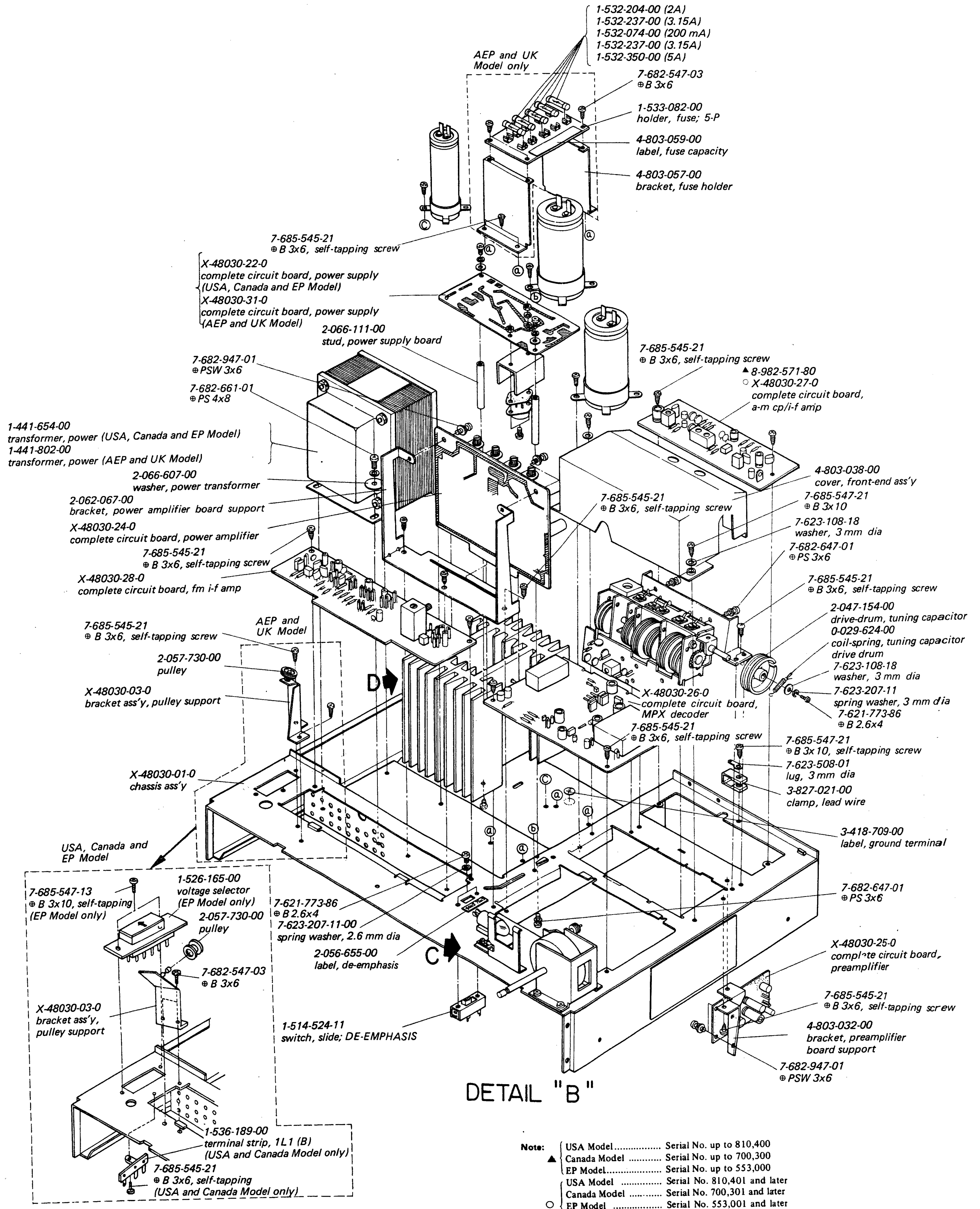
W – Washer
SW – Spring Washer
LW – Lock Washer
N – Nut

– Example –

⊕ P 3×10
Type of Slot
Length in mm (L)
Diameter in mm (D)
Type of Head

Note:
USA Model:
Serial No. 800,001 and later
Canada Model,
Serial No. 700,001 and later
EP Model;
Serial No. 550,001 and later
UK Model;
Serial No. 600,001 and later
AEP Model;
Serial No. 900,001 and later

(2)

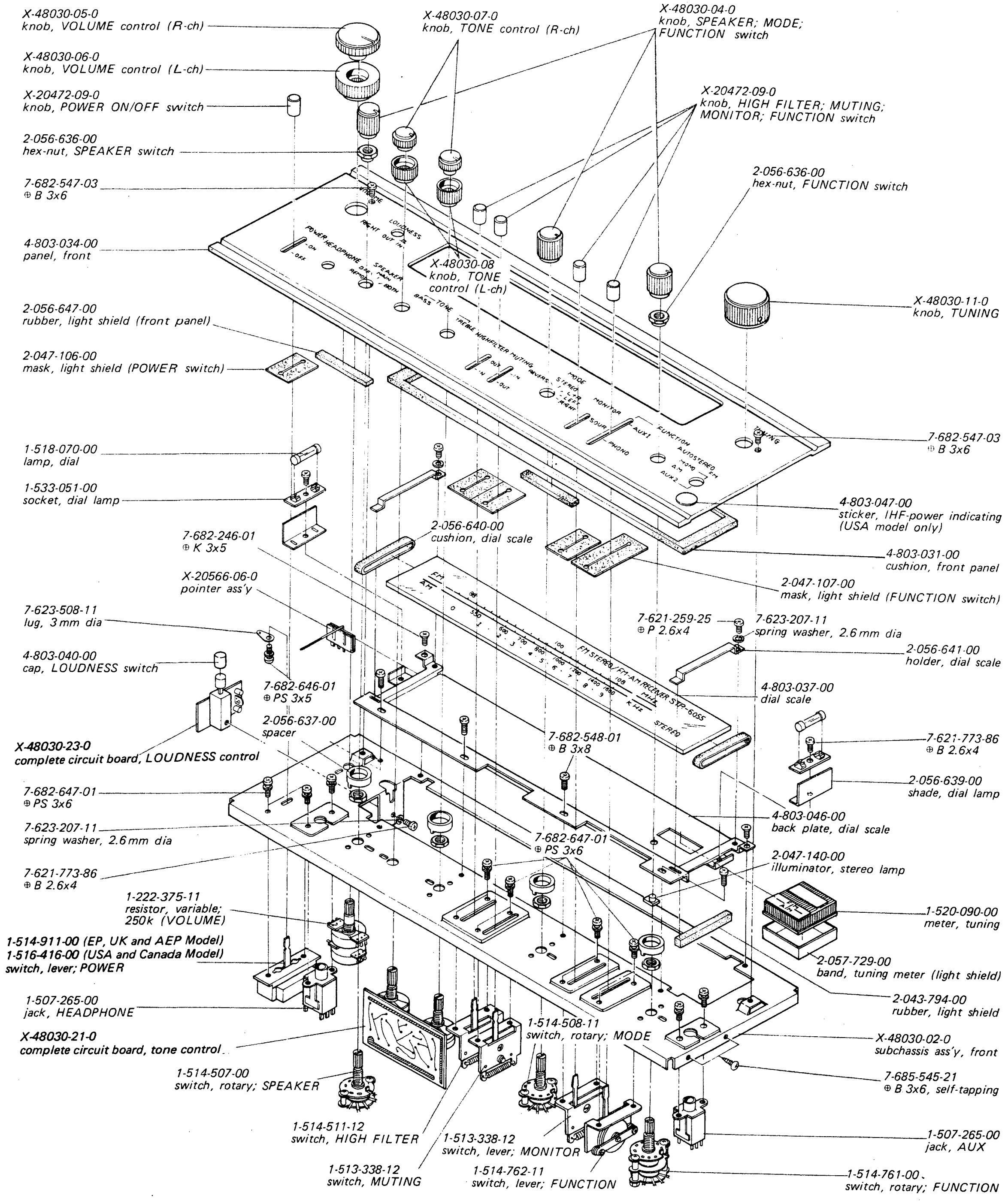

1-532-204-00 (2A)
1-532-237-00 (3.15A)
1-532-074-00 (200 mA)
1-532-237-00 (3.15A)
1-532-350-00 (5A)
AEP and UK Model only
7-682-547-03
⊕B 3x6
1-533-082-00
holder, fuse; 5-P
4-803-059-00
label, fuse capacity
4-803-057-00
bracket, fuse holder
7-685-545-21
⊕ B 3x6, self-tapping screw
X-48030-22-0
complete circuit board, power supply
(USA, Canada and EP Model)
X-48030-31-0
complete circuit board, power supply
(AEP and UK Model)
2-066-111-00
stud, power supply board
7-682-947-01
⊕ PSW 3x6
7-682-661-01
⊕ PS 4x8
1-441-654-00
transformer, power (USA, Canada and EP Model)
1-441-802-00
transformer, power (AEP and UK Model)
2-066-607-00
washer, power transformer
2-062-067-00
bracket, power amplifier board support
X-48030-24-0
complete circuit board, power amplifier
7-685-545-21
⊕ B 3x6, self-tapping screw
X-48030-28-0
complete circuit board, fm i-f amp
7-685-545-21
⊕ B 3x6, self-tapping screw
AEP and UK Model
2-057-730-00
pulley
X-48030-03-0
bracket ass'y, pulley support
D
X-48030-01-0
chassis ass'y
7-685-545-21
⊕ B 3x6, self-tapping screw
▲ 8-982-571-80
○ X-48030-27-0
complete circuit board,
a-m cp/i-f amp
4-803-038-00
cover, front-end ass'y
7-685-545-21
⊕ B 3x6, self-tapping screw
7-685-547-21
⊕ B 3x10
7-623-108-18
washer, 3 mm dia
7-682-647-01
⊕ PS 3x6
7-685-545-21
⊕ B 3x6, self-tapping screw
2-047-154-00
drive-drum, tuning capacitor
0-029-624-00
coil-spring, tuning capacitor
drive drum
7-623-108-18
washer, 3 mm dia
7-623-207-11
spring washer, 3 mm dia
7-621-773-86
⊕ B 2.6x4
X-48030-26-0
complete circuit board,
MPX decoder
7-685-545-21
⊕ B 3x6, self-tapping screw
7-685-547-21
⊕ B 3x10, self-tapping screw
7-623-508-01
lug, 3 mm dia
3-827-021-00
clamp, lead wire
3-418-709-00
label, ground terminal
7-682-647-01
⊕ PS 3x6
USA, Canada and
EP Model
7-685-547-13
⊕ B 3x10, self-tapping
(EP Model only)
1-526-165-00
voltage selector
(EP Model only)
2-057-730-00
pulley
7-682-547-03
⊕ B 3x6
X-48030-03-0
bracket ass'y,
pulley support
1-536-189-00
terminal strip, 1L1 (B)
(USA and Canada Model only)
7-685-545-21
⊕ B 3x6, self-tapping
(USA and Canada Model only)
7-621-773-86
⊕ B 2.6x4
7-623-207-11-00
spring washer, 2.6 mm dia
2-056-655-00
label, de-emphasis
C
1-514-524-11
switch, slide; DE-EMPHASIS
X-48030-25-0
complete circuit board,
preamplifier
7-685-545-21
⊕ B 3x6, self-tapping screw
4-803-032-00
bracket, preamplifier
board support
7-682-947-01
⊕ PSW 3x6
DETAIL "B"

Note:

▲ USA Model .... Serial No. up to 810,400
Canada Model .... Serial No. up to 700,300
EP Model .... Serial No. up to 553,000

○ USA Model .... Serial No. 810,401 and later
Canada Model .... Serial No. 700,301 and later
EP Model .... Serial No. 553,001 and later
UK Model .... Serial No. 600,001 and later
AEP Model .... Serial No. 900,001 and later

(3)


X-48030-05-0
knob, VOLUME control (R-ch)
X-48030-06-0
knob, VOLUME control (L-ch)
X-20472-09-0
knob, POWER ON/OFF switch
2-056-636-00
hex-nut, SPEAKER switch
7-682-547-03
⊕ B 3x6
4-803-034-00
panel, front
2-056-647-00
rubber, light shield (front panel)
2-047-106-00
mask, light shield (POWER switch)
1-518-070-00
lamp, dial
1-533-051-00
socket, dial lamp
7-682-246-01
⊕ K 3x5
X-20566-06-0
pointer ass'y
7-623-508-11
lug, 3mm dia
4-803-040-00
cap, LOUDNESS switch
7-682-646-01
⊕ PS 3x5
2-056-637-00
spacer
X-48030-23-0
complete circuit board, LOUDNESS control
7-682-647-01
⊕ PS 3x6
7-623-207-11
spring washer, 2.6mm dia
7-621-773-86
⊕ B 2.6x4
1-222-375-11
resistor, variable;
250k (VOLUME)
1-514-911-00 (EP, UK and AEP Model)
1-516-416-00 (USA and Canada Model)
switch, lever; POWER
1-507-265-00
jack, HEADPHONE
X-48030-21-0
complete circuit board, tone control
1-514-507-00
switch, rotary; SPEAKER
1-514-511-12
switch, HIGH FILTER
1-513-338-12
switch, MUTING
1-513-338-12
switch, lever; MONITOR
1-514-762-11
switch, lever; FUNCTION
X-48030-07-0
knob, TONE control (R-ch)
X-48030-04-0
knob, SPEAKER; MODE;
FUNCTION switch
X-20472-09-0
knob, HIGH FILTER; MUTING;
MONITOR; FUNCTION switch
2-056-636-00
hex-nut, FUNCTION switch
X-48030-08
knob, TONE
control (L-ch)
X-48030-11-0
knob, TUNING
7-682-547-03
⊕ B 3x6
4-803-047-00
sticker, IHF-power indicating
(USA model only)
2-056-640-00
cushion, dial scale
4-803-031-00
cushion, front panel
2-047-107-00
mask, light shield (FUNCTION switch)
7-621-259-25
⊕ P 2.6x4
7-623-207-11
spring washer, 2.6mm dia
2-056-641-00
holder, dial scale
4-803-037-00
dial scale
7-682-548-01
⊕ B 3x8
7-621-773-86
⊕ B 2.6x4
2-056-639-00
shade, dial lamp
4-803-046-00
back plate, dial scale
7-682-647-01
⊕ PS 3x6
2-047-140-00
illuminator, stereo lamp
1-520-090-00
meter, tuning
2-057-729-00
band, tuning meter (light shield)
2-043-794-00
rubber, light shield
1-514-508-11
switch, rotary; MODE
X-48030-02-0
subchassis ass'y, front
7-685-545-21
⊕ B 3x6, self-tapping
1-507-265-00
jack, AUX
1-514-761-00
switch, rotary; FUNCTION

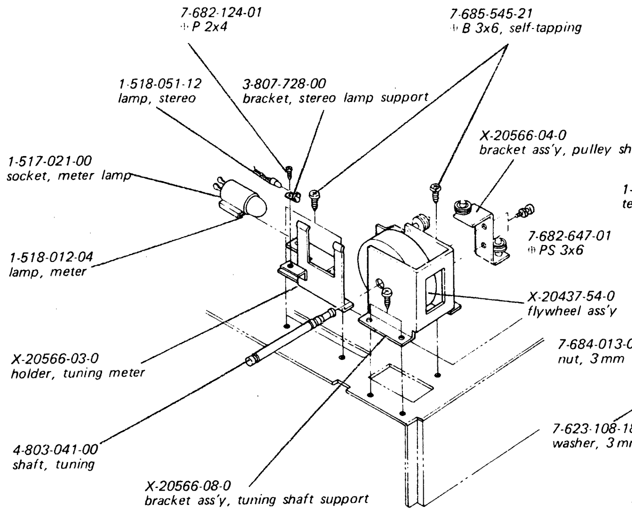
DETAIL "A" (TURN CLOCKWISE 90°)

(4)

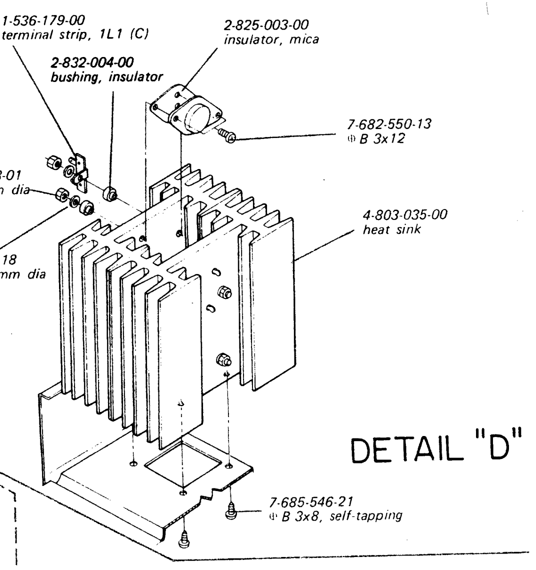
Note:

▲	USA Model	Serial No. up to 810,400
▲	Canada Model	Serial No. up to 700,300
▲	EP Model	Serial No. up to 553,000
○	USA Model	Serial No. 810,401 and later
○	Canada Model	Serial No. 700,301 and later
○	EP Model	Serial No. 553,001 and later
○	UK Model	Serial No. 600,001 and later
○	AEP Model	Serial No. 900,001 and later

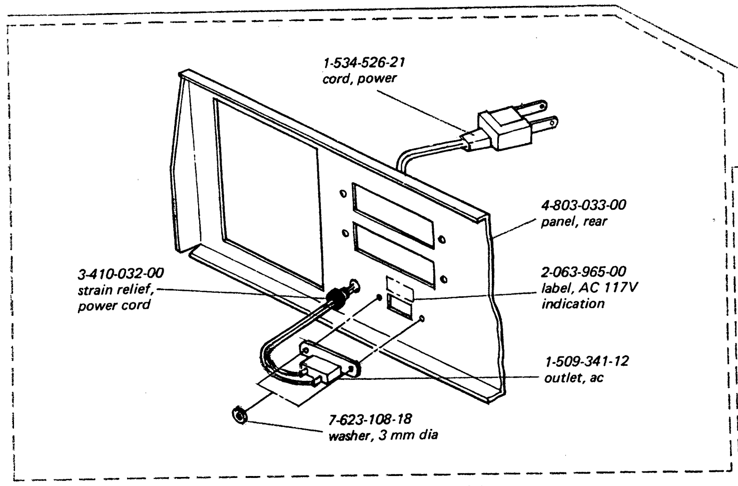
; AEP and UK Model only


7-682-124-01
⊕ P 2x4
7-685-545-21
⊕ B 3x6, self-tapping
1-518-051-12
lamp, stereo
3-807-728-00
bracket, stereo lamp support
X-20566-04-0
bracket ass'y, pulley shaft support
1-517-021-00
socket, meter lamp
1-518-012-04
lamp, meter
7-682-647-01
⊕ PS 3x6
X-20437-54-0
flywheel ass'y
X-20566-03-0
holder, tuning meter
4-803-041-00
shaft, tuning
X-20566-08-0
bracket ass'y, tuning shaft support

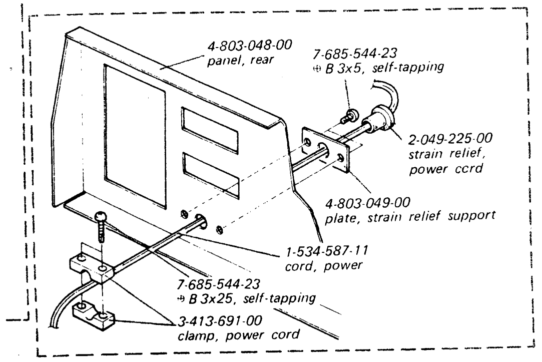
DETAIL "C"


1-536-179-00
terminal strip, 1L1 (C)
2-832-004-00
bushing, insulator
2-825-003-00
insulator, mica
7-682-550-13
⊕ B 3x12
7-684-013-01
nut, 3mm dia
7-623-108-18
washer, 3mm dia
4-803-035-00
heat sink
7-685-546-21
⊕ B 3x8, self-tapping

DETAIL "D"

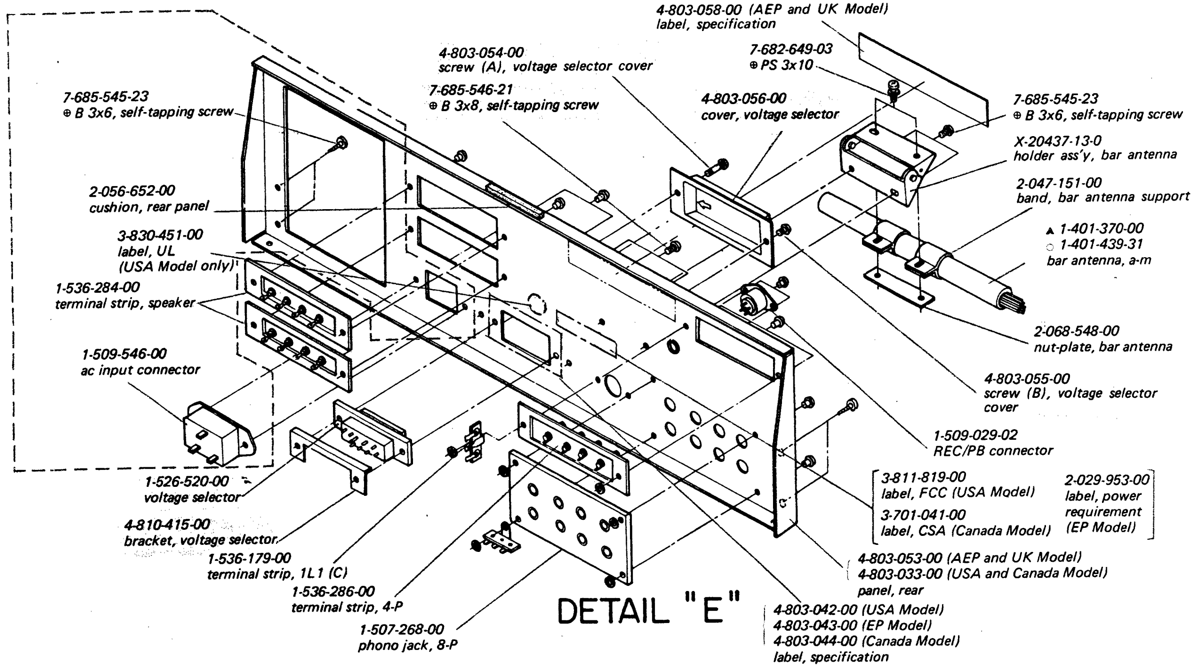

1-534-526-21
cord, power
4-803-033-00
panel, rear
2-063-965-00
label, AC 117V
indication
3-410-032-00
strain relief,
power cord
1-509-341-12
outlet, ac
7-623-108-18
washer, 3 mm dia

USA and Canada Model


4-803-048-00
panel, rear
7-685-544-23
⊕ B 3x5, self-tapping
2-049-225-00
strain relief,
power cord
4-803-049-00
plate, strain relief support
1-534-587-11
cord, power
7-685-544-23
⊕ B 3x25, self-tapping
3-413-691-00
clamp, power cord

EP Model

AEP and UK Model


4-803-058-00 (AEP and UK Model)
label, specification
4-803-054-00
screw (A), voltage selector cover
7-682-649-03
⊕ PS 3x10
7-685-545-23
⊕ B 3x6, self-tapping screw
7-685-546-21
⊕ B 3x8, self-tapping screw
4-803-056-00
cover, voltage selector
7-685-545-23
⊕ B 3x6, self-tapping screw
X-20437-13-0
holder ass'y, bar antenna
2-047-151-00
band, bar antenna support
2-056-652-00
cushion, rear panel
▲ 1-401-370-00
○ 1-401-439-31
bar antenna, a-m
3-830-451-00
label, UL
(USA Model only)
1-536-284-00
terminal strip, speaker
2-068-548-00
nut-plate, bar antenna
1-509-546-00
ac input connector
4-803-055-00
screw (B), voltage selector
cover
1-509-029-02
REC/PB connector
3-811-819-00
label, FCC (USA Model)
3-701-041-00
label, CSA (Canada Model)
2-029-953-00
label, power
requirement
(EP Model)
1-526-520-00
voltage selector
4-810-415-00
bracket, voltage selector
1-536-179-00
terminal strip, 1L1 (C)
1-536-286-00
terminal strip, 4-P
1-507-268-00
phono jack, 8-P
4-803-053-00 (AEP and UK Model)
4-803-033-00 (USA and Canada Model)
panel, rear
4-803-042-00 (USA Model)
4-803-043-00 (EP Model)
4-803-044-00 (Canada Model)
label, specification

DETAIL "E"

SECTION 7
ELECTRICAL PARTS LIST

COMPLETE CIRCUIT BOARDS

Ref. No.	Part No.	Description
	X-48030-21-0	tone control
	8-982-571-10	fm front-end
	X-48030-28-0	fm i-f amp
	X-48030-25-0	preamp
	X-48030-24-0	power amp
	X-48030-22-0	power supply (USA, Canada and EP Model)
	X-48030-31-0	power supply (AEP and UK Model)
	X-48030-26-0	MPX decoder
	▲ 8-982-571-80	a-m cp/i-f amp
	○ X-48030-27-0	a-m cp/i-f amp
	X-48030-23-0	loudness control

Note:

▲ {
USA Model . . . . Serial No. up to 810,400
Canada Model . . Serial No. up to 700,300
EP Model . . . . . Serial No. up to 553,000

○ {
USA Model . . . . Serial No. 810,401 and later
Canada Model . . Serial No. 700,301 and later
EP Model . . . . . Serial No. 553,001 and later
UK Model . . . . Serial No. 600,001 and later
AEP Model . . . . Serial No. 900,001 and later

SEMICONDUCTORS

Ref. No.	Part No.	Description
D101	diode	1S351M
D102	diode	1T243
D201	diode	1S1555
D202	diode	1S1555
D203	diode	1S1555
D204	diode	1S1555
D205	diode	1S1555
D206	diode	1S1555
D207	diode	1T22A
D208	diode	1T22A
D209	diode	1S1555
D210	diode	1S1555
D211	diode	1T22A
D212	diode	1T22A
D213	diode	1S1555
D301	diode	1T22A
D302	diode	1T22A
▲ D303	diode	1T22A
○ D303	diode	1S1555
D401	diode	1S1555
D402	diode	1S1555
D403	diode	1S1555
D404	diode	1S1555
D405	diode	1T22A
D406	diode	1T22A
D407	diode	1T22A
D408	diode	1T22A
D409	diode	1S1555
D701 (D751)	diode	SH-1S
D702 (D752)	diode	SV-31
D703 (D753)	diode	SH-1S
D704 (D754)	diode	SH-1S
D705 (D755)	diode	SH-1S
D706 (D756)	diode	SH-1S
D707 (D757)	diode	SH-1S
D708 (D758)	diode	SH-1S
D709 (D759)	diode	SH-1S
D710 (D760)	diode	SH-1S
D711 (D761)	diode	SH-1S
D801	diode	5B4
D802	diode	10D2
D803	diode	1T243M
D804	diode	1T243M
Q101	FET	2SK23
Q102	transistor	2SC710
Q103	transistor	2SC629
Q201	transistor	2SC403A
Q202	transistor	2SC710
Q203	transistor	2SC403A
Q204	transistor	2SC403A
Q205	transistor	2SC403A
Q206	transistor	2SC403A
Q207	FET	2SK23
Q208	FET	2SK23
Q209	transistor	2SC633A
Q210	transistor	2SC633A
▲ Q301	transistor	2SC403A
○ Q301	transistor	2SC1129
▲ Q302	FET	2SK23
○ Q302	transistor	2SC403A
Q303	transistor	2SC403A
Q304	transistor	2SC403A
Q305	transistor	2SC403A
Q401	FET	2SK23
Q402	transistor	2SC633A
Q403	transistor	2SC633A
Q404	transistor	2SC631A
Q405	transistor	2SC631A
Q406	transistor	2SC633A
Q407	transistor	2SC633A
Q501 (Q551)	transistor	2SC631A
Q502 (Q552)	transistor	2SC632A
Q601 (Q651)	transistor	2SC631A
Q602 (Q652)	transistor	2SC632A
Q701 (Q751)	transistor	2SC632A
Q702 (Q752)	transistor	2SC632A
Q703 (Q753)	transistor	2SA706
Q704 (Q754)	transistor	2SC633A
Q705 (Q755)	transistor	2SC633A
Q706 (Q756)	transistor	2SA677
Q707 (Q757)	transistor	2SC1124

Ref. No.	*Part No.*	*Description*
Q708 (Q758)		transistor 2SA706
Q709 (Q759)		transistor 2SD316
Q710 (Q760)		transistor 2SD316
Q711		transistor 2SC1124A
Q761		transistor 2SA706
Q801		transistor 2SD28

TRANSFORMERS, COILS AND INDUCTORS

Ref. No.	*Part No.*	*Description*
B101	1-417-014-00	balun
IFT101	1-403-295-00	transformer, i-f; 10.7 MHz
○ CFT301	1-403-150-00	CFT, 455 kHz
▲ IFT301	1-403-152-00	transformer, i-f; 455 kHz
○ IFT301	1-403-149-00	transformer, i-f; 455 kHz
▲ IFT302	1-403-128-00	transformer, i-f; 455 kHz
L101	1-401-351-00	coil, fm antenna
L102	1-425-446-00	coil, fm rf
L103	1-425-446-00	coil, fm rf
L104	1-405-377-00	coil, fm osc
L201	1-407-163-00	inductor, micro; 33μH
L202	1-407-184-00	inductor, micro; 3.3μH
L203	1-407-408-00	inductor, micro; 22mH
L204	1-407-184-00	inductor, micro; 3.3μH
L301	1-407-169-00	inductor, micro; 100μH
▲ L302	1-407-178-00	inductor, micro; 1.0μH
▲ L303	1-401-370-00	bar antenna, a-m
▲ L304	1-405-359-00	coil, a-m osc
▲ L305		--------------
▲ L306	1-407-177-00	inductor, micro; 470μH
L901	1-407-161-00	inductor, micro; 22μH
▲ L902	1-407-178-00	inductor, micro; 1.0μH
○ L902	1-407-182-00	inductor, micro; 2.2μH
L903	1-407-182-00	inductor, micro; 2.2μH
○ L904	1-401-439-31	bar antenna, a-m
MU401	1-425-548-00	MPX unit
T201	1-403-291-00	transformer, discriminator
T202	1-403-299-00	transformer, i-f; 10.7 kHz
○ T301	1-405-459-00	coil, a-m osc
T401	1-425-260-00	transformer, switching; 38 kHz
T801	1-441-654-00	transformer, power (USA, Canada and EP Model)
	1-441-802-00	transformer, power (AEP and UK Model)

Note:

▲ USA Model ...... Serial No. up to 810,400
Canada Model .... Serial No. up to 700,300
EP Model .... Serial No. up to 553,000

○ USA Model ...... Serial No. 810,401 and later
Canada Model .... Serial No. 700,301 and later
EP Model .... Serial No. 553,001 and later
UK Model .... Serial No. 600,001 and later
AEP Model ...... Serial No. 900,001 and later

CAPACITORS

All capacitance values are in μF except as indicated with p, which means μμF.

Ref. No.	*Part No.*	*Description*			
C101	1-101-862-11	18p	±5%	50V	ceramic
C102	1-101-938-11	1.5p	±10%	500V	ceramic
C103	1-101-952-11	16p	±5%	50V	ceramic
C104	1-101-937-11	1p	±10%	500V	ceramic
C105	1-101-945-11	8p	±5%	50V	ceramic
C106	1-102-985-11	180p	±5%	50V	ceramic
C107	1-101-072-11	0.01	$\pm^{80}_{20}\%$	50V	ceramic
C108	1-101-924-11	0.022	$\pm^{80}_{20}\%$	25V	ceramic
C109	1-101-072-11	0.01	$\pm^{80}_{20}\%$	25V	ceramic
C110	1-101-072-11	0.01	$\pm^{80}_{20}\%$	25V	ceramic
C111	1-101-869-11	27p	±5%	50V	ceramic
C112	1-102-077-11	0.01	±20%	50V	ceramic
C113	1-101-873-11	15p	±5%	50V	ceramic
C114	1-101-958-11	8p	±0.5p	50V	ceramic
C115	1-101-978-11	10p	±5%	50V	ceramic
C116	1-102-875-11	7p	±5%	50V	ceramic
C117	1-101-072-11	0.01	$\pm^{80}_{20}\%$	25V	ceramic
C118	1-101-924-11	0.022	$\pm^{80}_{20}\%$	25V	ceramic
C119	1-101-918-11	0.001	$\pm^{80}_{20}\%$	25V	ceramic
C120	1-101-978-11	10p	±5%	50V	ceramic
C121	1-101-957-11	7p	±0.5p	50V	ceramic
C122	1-101-924-11	0.022	$\pm^{80}_{20}\%$	25V	ceramic
C123	1-101-924-11	0.022	$\pm^{80}_{20}\%$	25V	ceramic
C124	1-121-353-11	47		16V	electrolytic
C125	1-105-679-12	0.033	±10%	50V	mylar
C126	1-121-391-11	1		50V	electrolytic
C201	1-101-919-11	0.002	$\pm^{80}_{20}\%$	25V	ceramic
C202	1-101-919-11	0.002	$\pm^{80}_{20}\%$	25V	ceramic
C203	1-101-919-11	0.002	$\pm^{80}_{20}\%$	25V	ceramic
C204	1-101-924-11	0.022	$\pm^{80}_{20}\%$	25V	ceramic
C205	1-101-924-11	0.022	$\pm^{80}_{20}\%$	25V	ceramic
C206	1-101-919-11	0.002	$\pm^{80}_{20}\%$	25V	ceramic
C207	1-101-919-11	0.002	$\pm^{80}_{20}\%$	25V	ceramic
C208	1-101-919-11	0.002	$\pm^{80}_{20}\%$	25V	ceramic
C209	1-101-919-11	0.002	$\pm^{80}_{20}\%$	25V	ceramic
C210	1-101-919-11	0.002	$\pm^{80}_{20}\%$	25V	ceramic
C211	1-101-919-11	0.002	$\pm^{80}_{20}\%$	25V	ceramic
C212 C213		built in T201			
C214	1-101-924-11	0.022	$\pm^{80}_{20}\%$	25V	ceramic
C215	1-105-689-12	0.22	±10%	50V	mylar
C216	1-101-030-11	200p	±5%	50V	ceramic
C217	1-101-030-11	200p	±5%	50V	ceramic
C218	1-101-030-11	200p	±5%	50V	ceramic
C219	1-121-471-11	10		16V	electrolytic
C220	1-107-140-11	240p	±10%	50V	silvered mica
C221	1-101-424-11	500p	±20%	250V	ceramic
C222	1-127-020-11	0.22		10V	solid aluminum
C223	1-127-021-11	0.33		10V	solid aluminum
C224	1-101-924-11	0.022	$\pm^{80}_{20}\%$	25V	ceramic
C225	1-121-471-11	10		16V	electrolytic
C226	1-101-924-11	0.022	$\pm^{80}_{20}\%$	25V	ceramic
C229	1-101-872-11	33p	±5%	50V	ceramic
C230	1-101-924-11	0.022	$\pm^{80}_{20}\%$	25V	ceramic
C231	1-121-471-11	10		16V	electrolytic
C232		built in T202			
C233	1-121-471-11	10		16V	electrolytic
C234	1-101-922-11	4,700p	$\pm^{80}_{20}\%$	50V	ceramic

Ref. No.	Part No.	Description			
C235	1-101-924-11	0.022	$^{+80}_{-20}\%$	25V	ceramic
C236	1-121-395-11	4.7		25V	electrolytic
C237	1-121-409-11	47		16V	electrolytic
C239	1-101-924-11	0.022	$^{+80}_{-20}\%$	25V	ceramic
C240	1-121-471-11	10		16V	electrolytic
C241	1-101-924-11	0.022	$^{+80}_{-20}\%$	25V	ceramic
C242	1-105-683-12	0.068	±10%	50V	mylar
C243	1-105-837-12	0.022	±20%	50V	mylar
C244	1-121-391-11	1		50V	electrolytic
C245	1-121-409-11	47		16V	electrolytic

Note: ▲
USA Model ...... Serial No. up to 810,400
Canada Model .... Serial No. up to 700,300
EP Model .... Serial No. up to 553,000

Ref. No.	Part No.	Description			
▲ C301	1-101-072-11	0.01	$^{+80}_{-20}\%$	25V	ceramic
▲ C302	1-105-837-12	0.022	±20%	50V	mylar
▲ C303	1-101-073-11	0.02	$^{+80}_{-20}\%$	25V	ceramic
▲ C304	1-101-072-11	0.01	$^{+80}_{-20}\%$	25V	ceramic
▲ C305	1-101-073-11	0.02	$^{+80}_{-20}\%$	25V	ceramic
▲ C306		built in IFT301			
▲ C307	1-101-073-11	0.02	$^{+80}_{-20}\%$	25V	ceramic
▲ C308	1-121-398-11	10		25V	electrolytic
▲ C309		---------------			
▲ C310	1-101-073-11	0.02	$^{+80}_{-20}\%$	25V	ceramic
▲ C311	1-105-837-12	0.022	±20%	50V	mylar
▲ C312	1-103-608-11	200p	±5%	50V	styrol
▲ C313	1-121-469-11	10		10V	electrolytic
▲ C314		built in IFT302			
▲ C315	1-101-073-11	0.02	$^{+80}_{-20}\%$	25V	ceramic
▲ C316	1-121-409-11	47		16V	electrolytic
▲ C317	1-105-683-12	0.068	±10%	50V	mylar
▲ C318	1-105-837-12	0.022	±20%	50V	mylar
▲ C319	1-127-021-11	0.33		10V	solid aluminum
▲ C320	1-101-072-11	0.01	$^{+80}_{-20}\%$	25V	ceramic
▲ C321	1-101-073-11	0.02	$^{+80}_{-20}\%$	25V	ceramic
▲ C322	1-121-391-11	1		50V	electrolytic
▲ C323	1-121-391-11	1		50V	electrolytic
▲ C324	1-101-073-11	0.02	$^{+80}_{-20}\%$	25V	ceramic
▲ C325	1-105-829-12	0.0047	±20%	50V	mylar
▲ C326	1-121-409-11	47		16V	electrolytic
▲ C327	1-103-617-11	470p	±5%	50V	styrol
▲ C328	1-101-871-11	30p	±5%	50V	ceramic
▲ C329	1-101-073-11	0.02	$^{+80}_{-20}\%$	25V	ceramic
▲ C330	1-101-073-11	0.02	$^{+80}_{-20}\%$	25V	ceramic
▲ C331	1-101-073-11	0.02	$^{+80}_{-20}\%$	25V	ceramic
▲ C332	1-121-415-11	100		16V	electrolytic
▲ C335	1-121-391-11	1		50V	electrolytic
▲ C336	1-101-073-11	0.02	$^{+80}_{-20}\%$	25V	ceramic

Note: ○
USA Model ...... Serial No. 810,401 and later
Canada Model .... Serial No. 700,301 and later
EP Model .... Serial No. 553,001 and later
UK Model .... Serial No. 600,001 and later
AEP Model ...... Serial No. 900,001 and later

Ref. No.	Part No.	Description			
○ C301	1-103-617-11	470p	±5%	50V	styrol
○ C302	1-105-829-12	0.0047	±20%	50V	mylar
○ C303	1-105-837-12	0.022	±20%	50V	mylar
○ C304	1-102-977-11	200p	±5%	50V	ceramic
○ C305	1-102-945-11	8p	±5%	50V	ceramic
○ C306	1-105-679-12	0.033	±20%	50V	mylar
○ C307	1-105-837-12	0.022	±20%	50V	mylar
○ C308		built in CFT301			
○ C309	1-105-837-12	0.022	±20%	50V	mylar
○ C310		built in CFT301			
○ C311	1-105-837-12	0.022	±20%	50V	mylar
○ C312	1-105-673-12	0.01	±20%	50V	mylar
○ C313	1-105-685-12	0.1	±20%	50V	mylar
○ C314	1-101-884-11	56p	±5%	50V	ceramic
○ C315	1-101-073-11	0.02	$^{+80}_{-20}\%$	25V	ceramic
○ C316		built in IFT301			
○ C317	1-121-415-11	100		16V	electrolytic
○ C318	1-101-073-11	0.02	$^{+80}_{-20}\%$	25V	ceramic
○ C319	1-101-073-11	0.02	$^{+80}_{-20}\%$	25V	ceramic
○ C320	1-127-019-11	0.1		10V	solid aluminum
○ C321	1-102-073-11	0.02	$^{+80}_{-20}\%$	50V	ceramic
○ C322	1-121-395-11	4.7		25V	electrolytic
○ C323	1-101-073-11	0.02	$^{+80}_{-20}\%$	25V	ceramic
○ C324	1-121-415-11	100		16V	electrolytic
○ C325	1-121-456-11	3.3		25V	electrolytic
○ C326	1-121-456-11	3.3		25V	electrolytic
○ C327	1-121-413-11	100		6.3V	electrolytic
○ C328	1-105-837-12	0.022	±20%	50V	mylar
○ C329	1-105-673-12	0.01	±20%	50V	mylar
○ C330	1-105-837-12	0.022	±20%	50V	mylar
○ C331	1-102-960-11	24p	±5%	50V	ceramic
○ C332		---------------			
○ C333	1-102-935-11	2p	±0.25pF	50V	ceramic
○ C334	1-105-837-12	0.022	±20%	50V	mylar
○ CT301 ○ CT302	1-141-095-11	capacitor, trimmer			

Ref. No.	Part No.	Description			
C401	1-105-683-12	0.068	±10%	50V	mylar
C402	1-105-661-12	0.001	±10%	50V	mylar
C403	1-105-661-12	0.001	±10%	50V	mylar
C404	1-121-398-11	10		25V	electrolytic
C405	1-105-669-12	0.0047	±10%	50V	mylar
C406	1-121-344-11	3.3		25V	electrolytic
C407	1-121-413-11	100		6.3V	electrolytic
C408	1-121-409-11	47		16V	electrolytic
C409	1-103-575-11	4,700p	±5%	50V	styrol
C410	1-127-022-11	0.47		10V	solid aluminum
C411	1-121-403-11	33		16V	electrolytic
C412	1-121-403-11	33		16V	electrolytic
C413	1-105-679-12	0.033	±10%	50V	mylar
C414	1-105-679-12	0.033	±10%	50V	mylar
C415	1-121-402-11	33		6.3V	electrolytic
C416	1-101-884-11	56p	±5%	50V	ceramic
C417	1-101-884-11	56p	±5%	50V	ceramic
C418	1-121-391-11	1		50V	electrolytic
C419	1-121-391-11	1		50V	electrolytic
C420	1-121-419-11	220		6.3V	electrolytic

Ref. No.	Part No.	Description			
C421	1-121-419-11	220		6.3V	electrolytic
C422	1-105-683-12	0.068	±10%	50V	mylar
C423	1-105-683-12	0.068	±10%	50V	mylar
C424	1-127-013-11	2.2		6.3V	solid aluminum
C425	1-127-013-11	2.2		6.3V	solid aluminum
C426	1-105-667-12	0.0033	±10%	6.3V	mylar
C427	1-121-409-11	47		16V	electrolytic
C428	1-127-021-11	0.33		10V	solid aluminum
C431	1-105-671-12	0.0068	±10%	50V	mylar
C501 (C551)	1-121-912-11	1		50V	electrolytic
C502 (C552)	1-105-661-12	0.001	±10%	50V	mylar
C503	1-121-405-11	33		50V	electrolytic
C504 (C554)	1-121-420-11	220		10V	electrolytic
C505 (C555)	1-105-674-12	0.012	±10%	50V	mylar
C506 (C556)	1-105-667-12	0.0033	±10%	50V	mylar
C507 (C557)	1-121-911-11	0.47		50V	electrolytic
C601 (C651)	1-107-137-11	180p	±10%	50V	silvered mica
C602 (C652)	1-105-677-12	0.022	±10%	50V	mylar
C603 (C653)	1-105-685-12	0.1	±10%	50V	mylar
C604 (C654)	1-105-661-12	0.001	±10%	50V	mylar
C605 (C655)	1-121-420-11	220		10V	electrolytic
C606 (C656)	1-107-131-11	100p	±10%	50V	silvered mica
C607 (C657)	1-121-420-11	220		10V	electrolytic
C608 (C658)	1-121-396-11	4.7		50V	electrolytic
C609 (C659)	1-105-671-12	0.0068	±10%	50V	mylar
C610 (C660)	1-105-681-12	0.047	±10%	50V	mylar
C611 (C661)	1-105-683-12	0.068	±10%	50V	mylar
C612 (C662)	1-105-681-12	0.047	±10%	50V	mylar
C613 (C663)	1-105-669-12	0.0047	±10%	50V	mylar
C614	1-121-405-11	33		50V	electrolytic
C701 (C751)	1-105-689-12	0.22	±10%	50V	mylar
C702 (C752)	1-121-392-11	3.3		25V	electrolytic
C703 (C753)	1-107-123-11	47p	±10%	50V	silvered mica
C704 (C754)	1-121-409-11	47		16V	electrolytic
C705 (C755)	1-121-425-11	470		10V	electrolytic
C707 (C757)	1-105-679-12	0.033	±10%	50V	mylar
C708 (C758)	1-121-404-11	33		25V	electrolytic
C709 (C759)	1-121-404-11	33		25V	electrolytic
C710 (C760)	1-105-681-12	0.047	±10%	50V	mylar
C711 (C761)	1-105-681-12	0.047	±10%	50V	mylar
C712 (C762)	1-107-142-11	300p	±10%	50V	silvered mica
C713 (C763)	1-121-417-11	100		50V	electrolytic
C714 (C764)	1-121-417-11	100		50V	electrolytic
C715 (C765)	1-102-942-11	5p	±0.5p	50V	ceramic
C716 (C766)	1-105-673-12	0.01	±10%	50V	mylar
C801	1-105-917-12	0.022	±20%	200V	mylar
C802	1-105-917-12	0.022	±20%	200V	mylar
C803	1-105-917-12	0.022	±20%	200V	mylar
C804	1-105-917-12	0.022	±20%	200V	mylar
C805	1-105-917-12	0.022	±20%	200V	mylar
C806	1-121-815-11	4,700		50V	electrolytic
C807	1-121-815-11	4,700		50V	electrolytic
C808	1-121-330-11	1,000		60V	electrolytic
C809	1-121-733-11	470		25V	electrolytic
C810	1-121-417-11	100		50V	electrolytic
C811	1-121-416-11	100		25V	electrolytic
C812	1-121-417-11	100		50V	electrolytic
C813	1-121-358-11	220		16V	electrolytic
C901	1-101-073-11	0.02	$\pm^{80}_{20}$%	25V	ceramic
CV101 CV102 CV103 CV104 CV301 CV302	1-151-191-13	capacitor, tuning			

RESISTORS

All resistors are in ohms, ±5%, ¼W and carbon type unless otherwise indicated.

Ref. No.	Part No.	Description
R101	1-244-665-11	470
R102	1-244-689-11	4.7k
R103	1-244-697-11	10k
R104	1-244-666-11	510
R105	1-244-673-11	1k
R106	1-244-685-11	3.3k
R107	1-244-677-11	1.5k
R108	1-244-666-11	510
R109	1-244-692-11	6.2k
R110	1-244-697-11	10k
R111	1-244-721-11	100k
R112	1-244-697-11	10k
R113	1-244-642-11	51
R114	1-244-677-11	1.5k
R201	1-244-671-11	820
R202	1-244-677-11	1.5k
R203	1-244-685-11	3.3k
R204	1-244-653-11	150
R205	1-244-673-11	1k
R206	1-244-673-11	1k
R207	1-244-671-11	820
R208	1-244-677-11	1.5k
R209	1-244-685-11	3.3k
R210	1-244-653-11	150
R211	1-244-673-11	1k
R212	1-244-673-11	1k
R213	1-244-649-11	100
R214	1-244-657-11	220
R215	1-244-721-11	100k
R216	1-244-671-11	820
R217	1-244-689-11	4.7k
R218	1-244-675-11	1.2k
R219	1-244-653-11	150
R220	1-244-663-11	390
R221	1-244-677-11	1.5k
R222	1-244-679-11	1.8k
R223	1-244-671-11	820
R224	1-244-673-11	1k
R225	1-244-649-11	100

Ref. No.	*Part No.*	*Description*
R226	1-244-679-11	1.8 k
R227	1-244-721-11	100 k
R228	1-244-659-11	270
R229	1-244-705-11	22 k
R230	1-244-695-11	8.2 k
R231	1-244-673-11	1 k
R232	1-244-721-11	100 k
R233	1-244-649-11	100
R234	1-244-665-11	470
R235	1-244-709-11	33 k
R236	1-244-697-11	10 k
R237	1-244-673-11	1 k
R238	1-244-673-11	1 k
R239	1-244-673-11	1 k
R240	1-244-649-11	100
R241	1-244-713-11	47 k
R242	1-244-713-11	47 k
R243	1-244-691-11	5.6 k
R244	1-244-691-11	5.6 k
R245	1-244-673-11	1 k
R246	1-244-673-11	1 k
R247	1-244-699-11	12 k
R248	1-244-745-11	1 M
R249	1-244-734-11	360 k
R250	1-244-745-11	1 M
R251	1-244-723-11	120 k
R252	1-244-735-11	390 k
R253	1-244-745-11	1 M
R254	1-244-642-11	51
R255	1-244-642-11	51
R256	1-244-632-11	20
R257	1-244-657-11	220
R258	1-244-703-11	18 k
R259	1-244-689-11	4.7 k
R260	1-244-632-11	20
R261	1-244-699-11	12 k
R262	1-244-642-11	51
R263	1-244-670-11	750
R264	1-244-699-11	12 k
R265	1-244-720-11	91 k
R266	1-244-701-11	15 k
R267	1-244-733-11	330 k
R268	1-244-701-11	15 k
R269		---------------
R270	1-244-659-11	270
R271	1-244-705-11	22 k
R272	1-244-658-11	240
R273	1-244-649-11	100

Note: ▲
USA Model ..... Serial No. up to 810,400
Canada Model .... Serial No. up to 700,300
EP Model .... Serial No. up to 553,000

Ref. No.	*Part No.*	*Description*
▲ R301	1-244-699-11	12 k
▲ R302	1-244-705-11	22 k
▲ R303	1-244-685-11	3.3 k
▲ R304	1-244-673-11	1 k
▲ R305	1-244-663-11	390
▲ R306	1-244-697-11	10 k
▲ R307	1-244-689-11	4.7 k
▲ R308	1-244-673-11	1 k
▲ R309	1-244-677-11	1.5 k
▲ R310	1-244-707-11	27 k
▲ R311	1-244-691-11	5.6 k
▲ R312	1-244-673-11	1 k
▲ R313	1-244-673-11	1 k
▲ R314		---------------
▲ R315	1-244-671-11	820
▲ R316	1-244-684-11	3 k
▲ R317	1-244-703-11	18 k
▲ R318	1-244-691-11	5.6 k
▲ R319	1-244-665-11	470
▲ R320	1-244-667-11	560
▲ R321	1-244-679-11	1.8 k
▲ R322	1-244-694-11	7.5 k
▲ R323	1-244-673-11	1 k
▲ R324	1-222-984-11	33 k(B), adjustable
▲ R325	1-244-697-11	10 k
▲ R326	1-244-692-11	6.2 k
▲ R327	1-244-717-11	68 k
▲ R328	1-244-701-11	15 k
▲ R329	1-244-673-11	1 k
▲ R330	1-244-671-11	820
▲ R331	1-244-649-11	100
▲ R332	1-244-649-11	100
▲ R333	1-244-643-11	56
▲ R334	1-244-697-11	10 k
▲ R335	1-244-692-11	6.2 k
▲ R336	1-244-673-11	1 k

Note: ○
USA Model ..... Serial No. 810,401 and later
Canada Model ... Serial No. 700,301 and later
EP Model ...... Serial No. 553,001 and later
UK Model ...... Serial No. 600,001 and later
AEP Model ..... Serial No. 900,001 and later

Ref. No.	*Part No.*	*Description*
○ R301	1-244-691-11	5.6 k
○ R302	1-244-704-11	20 k
○ R303	1-244-708-11	30 k
○ R304	1-244-634-11	24
○ R305	1-244-647-11	82
○ R306	1-244-708-11	30 k
○ R307	1-244-673-11	1 k
○ R308	1-244-691-11	5.6 k
○ R309	1-244-649-11	100
○ R310	1-244-719-11	82 k
○ R311	1-244-691-11	5.6 k
○ R312	1-244-673-11	1 k
○ R313	1-244-684-11	3 k
○ R314	1-244-689-11	4.7 k
○ R315	1-244-645-11	68
○ R316	1-244-657-11	220
○ R317	1-244-689-11	4.7 k
○ R318	1-244-645-11	68
○ R319	1-202-565-11	470 ±10% ½W composition
○ R320	1-244-673-11	1 k

Ref. No.	Part No.	Description
○ R321	1-244-673-11	1 k
○ R322	1-244-680-11	2 k
○ R323	1-242-657-11	220
○ R324	1-242-701-11	15 k
○ R325	1-244-691-11	5.6 k
○ R326	1-244-689-11	4.7 k
○ R327	1-244-645-11	68
○ R328	1-244-673-11	1 k
○ R329	1-244-701-11	15 k
○ R330	1-244-680-11	2 k
○ R331	1-244-671-11	820
○ R332	1-244-657-11	220
○ R333	1-244-717-11	68 k
○ R334	1-244-649-11	100
○ R335	1-244-649-11	100
R401	1-244-739-11	470 k
R402	1-244-673-11	1 k
R403	1-244-673-11	1 k
R404	1-244-706-11	24 k
R405	1-202-560-11	300 ±10% ½W composition
R406	1-244-689-11	4.7 k
R407	1-244-709-11	33 k
R408	1-244-670-11	750
R409	1-244-731-11	270 k
R410	1-244-671-11	820
R411	1-244-690-11	5.1 k
R412	1-244-689-11	4.7 k
R413	1-244-673-11	1 k
R414	1-244-682-11	2.4 k
R415	1-244-649-11	100
R416	1-244-661-11	330
R417	1-244-661-11	330
R418	1-244-661-11	330
R419	1-244-661-11	330
R420	1-244-643-11	56
R421	1-244-643-11	56
R422	1-244-679-11	1.8 k
R423	1-244-679-11	1.8 k
R424	1-244-693-11	6.8 k
R425	1-244-693-11	6.8 k
R426	1-244-671-11	820
R427	1-244-671-11	820
R428	1-244-715-11	56 k
R429	1-244-715-11	56 k
R430	1-244-661-11	330
R431	1-244-661-11	330
R432	1-244-715-11	56 k
R433	1-244-715-11	56 k
R434	1-244-702-11	16 k
R435	1-244-702-11	16 k
R436	1-244-685-11	3.3 k
R437	1-244-685-11	3.3 k
R438	1-244-659-11	270
R439	1-244-659-11	270
R440	1-244-677-11	1.5 k

Ref. No.	Part No.	Description
R441	1-244-677-11	1.5 k
R442	1-244-685-11	3.3 k
R443	1-244-685-11	3.3 k
R444	1-244-695-11	8.2 k
R445	1-244-695-11	8.2 k
R446	1-244-709-11	33 k
R447	1-244-667-11	560
R448	1-244-702-11	16 k
R449	1-244-702-11	16 k
R501 (R551)	1-242-713-11	47 k
R502 (R552)	1-242-745-11	1 M
R503 (R553)	1-242-681-11	2.2 k
R504 (R554)	1-242-737-11	470 k
R505 (R555)	1-242-661-11	330
R506	1-242-719-11	82 k
R507 (R557)	1-242-691-11	5.6 k
R508 (R558)	1-242-659-11	270
R509 (R559)	1-242-705-11	22 k
R510 (R560)	1-242-653-11	150
R511 (R561)	1-242-735-11	390 k
R512 (R562)	1-242-701-11	15 k
R513 (R563)	1-242-689-11	4.7 k
R601 (R651)	1-244-712-11	43 k
R602 (R652)	1-244-704-11	20 k
R603 (R653)	1-242-663-11	390
R604 (R654)	1-242-737-11	470 k
R605 (R655)	1-242-735-11	390 k
R606 (R656)	1-242-701-11	15 k
R607 (R657)	1-242-735-11	390 k
R608 (R658)	1-242-691-11	5.6 k
R609 (R659)	1-242-665-11	470
R610 (R660)	1-242-675-11	1.2 k
R611 (R661)	1-242-695-11	8.2 k
R612 (R662)	1-242-709-11	33 k
R613 (R663)	1-242-669-11	680
R614 (R664)	1-242-655-11	180
R615 (R665)	1-242-699-11	12 k
R616 (R666)	1-242-691-11	5.6 k
R617	1-242-719-11	82 k
R701 (R751)	1-242-717-11	68 k
R702 (R752)	1-242-705-11	22 k
R703 (R753)	1-242-677-11	1.5 k
R704 (R754)	1-242-705-11	22 k
R705 (R755)	1-242-677-11	1.5 k
R706 (R756)	1-242-699-11	12 k
R707 (R757)	1-242-677-11	1.5 k
R708 (R758)	1-242-687-11	3.9 k
R709 (R759)	1-242-695-11	8.2 k
R710 (R760)	1-242-689-11	4.7 k
R711 (R761)	1-242-661-11	330
R712 (R762)	1-202-591-11	5.6 k ±10% ½W composition
R713 (R763)	1-242-717-11	68 k
R714 (R764)	1-242-661-11	330
R715 (R765)	1-242-661-11	330

Ref. No.	*Part No.*	*Description*
○ R321	1-244-673-11	1 k
○ R322	1-244-680-11	2 k
○ R323	1-242-657-11	220
○ R324	1-242-701-11	15 k
○ R325	1-244-691-11	5.6 k
○ R326	1-244-689-11	4.7 k
○ R327	1-244-645-11	68
○ R328	1-244-673-11	1 k
○ R329	1-244-701-11	15 k
○ R330	1-244-680-11	2 k
○ R331	1-244-671-11	820
○ R332	1-244-657-11	220
○ R333	1-244-717-11	68 k
○ R334	1-244-649-11	100
○ R335	1-244-649-11	100

Ref. No.	*Part No.*	*Description*
R401	1-244-739-11	470 k
R402	1-244-673-11	1 k
R403	1-244-673-11	1 k
R404	1-244-706-11	24 k
R405	1-202-560-11	300 ±10% ½W composition
R406	1-244-689-11	4.7 k
R407	1-244-709-11	33 k
R408	1-244-670-11	750
R409	1-244-731-11	270 k
R410	1-244-671-11	820
R411	1-244-690-11	5.1 k
R412	1-244-689-11	4.7 k
R413	1-244-673-11	1 k
R414	1-244-682-11	2.4 k
R415	1-244-649-11	100
R416	1-244-661-11	330
R417	1-244-661-11	330
R418	1-244-661-11	330
R419	1-244-661-11	330
R420	1-244-643-11	56
R421	1-244-643-11	56
R422	1-244-679-11	1.8 k
R423	1-244-679-11	1.8 k
R424	1-244-693-11	6.8 k
R425	1-244-693-11	6.8 k
R426	1-244-671-11	820
R427	1-244-671-11	820
R428	1-244-715-11	56 k
R429	1-244-715-11	56 k
R430	1-244-661-11	330
R431	1-244-661-11	330
R432	1-244-715-11	56 k
R433	1-244-715-11	56 k
R434	1-244-702-11	16 k
R435	1-244-702-11	16 k
R436	1-244-685-11	3.3 k
R437	1-244-685-11	3.3 k
R438	1-244-659-11	270
R439	1-244-659-11	270
R440	1-244-677-11	1.5 k

Ref. No.	*Part No.*	*Description*
R441	1-244-677-11	1.5 k
R442	1-244-685-11	3.3 k
R443	1-244-685-11	3.3 k
R444	1-244-695-11	8.2 k
R445	1-244-695-11	8.2 k
R446	1-244-709-11	33 k
R447	1-244-667-11	560
R448	1-244-702-11	16 k
R449	1-244-702-11	16 k
R501 (R551)	1-242-713-11	47 k
R502 (R552)	1-242-745-11	1 M
R503 (R553)	1-242-681-11	2.2 k
R504 (R554)	1-242-737-11	470 k
R505 (R555)	1-242-661-11	330
R506	1-242-719-11	82 k
R507 (R557)	1-242-691-11	5.6 k
R508 (R558)	1-242-659-11	270
R509 (R559)	1-242-705-11	22 k
R510 (R560)	1-242-653-11	150
R511 (R561)	1-242-735-11	390 k
R512 (R562)	1-242-701-11	15 k
R513 (R563)	1-242-689-11	4.7 k
R601 (R651)	1-244-712-11	43 k
R602 (R652)	1-244-704-11	20 k
R603 (R653)	1-242-663-11	390
R604 (R654)	1-242-737-11	470 k
R605 (R655)	1-242-735-11	390 k
R606 (R656)	1-242-701-11	15 k
R607 (R657)	1-242-735-11	390 k
R608 (R658)	1-242-691-11	5.6 k
R609 (R659)	1-242-665-11	470
R610 (R660)	1-242-675-11	1.2 k
R611 (R661)	1-242-695-11	8.2 k
R612 (R662)	1-242-709-11	33 k
R613 (R663)	1-242-669-11	680
R614 (R664)	1-242-655-11	180
R615 (R665)	1-242-699-11	12 k
R616 (R666)	1-242-691-11	5.6 k
R617	1-242-719-11	82 k
R701 (R751)	1-242-717-11	68 k
R702 (R752)	1-242-705-11	22 k
R703 (R753)	1-242-677-11	1.5 k
R704 (R754)	1-242-705-11	22 k
R705 (R755)	1-242-677-11	1.5 k
R706 (R756)	1-242-699-11	12 k
R707 (R757)	1-242-677-11	1.5 k
R708 (R758)	1-242-687-11	3.9 k
R709 (R759)	1-242-695-11	8.2 k
R710 (R760)	1-242-689-11	4.7 k
R711 (R761)	1-242-661-11	330
R712 (R762)	1-202-591-11	5.6 k ±10% ½W composition
R713 (R763)	1-242-717-11	68 k
R714 (R764)	1-242-661-11	330
R715 (R765)	1-242-661-11	330

Ref. No.	Part No.	Description
○ R321	1-244-673-11	1 k
○ R322	1-244-680-11	2 k
○ R323	1-242-657-11	220
○ R324	1-242-701-11	15 k
○ R325	1-244-691-11	5.6 k
○ R326	1-244-689-11	4.7 k
○ R327	1-244-645-11	68
○ R328	1-244-673-11	1 k
○ R329	1-244-701-11	15 k
○ R330	1-244-680-11	2 k
○ R331	1-244-671-11	820
○ R332	1-244-657-11	220
○ R333	1-244-717-11	68 k
○ R334	1-244-649-11	100
○ R335	1-244-649-11	100
R401	1-244-739-11	470 k
R402	1-244-673-11	1 k
R403	1-244-673-11	1 k
R404	1-244-706-11	24 k
R405	1-202-560-11	300 ±10% ½W composition
R406	1-244-689-11	4.7 k
R407	1-244-709-11	33 k
R408	1-244-670-11	750
R409	1-244-731-11	270 k
R410	1-244-671-11	820
R411	1-244-690-11	5.1 k
R412	1-244-689-11	4.7 k
R413	1-244-673-11	1 k
R414	1-244-682-11	2.4 k
R415	1-244-649-11	100
R416	1-244-661-11	330
R417	1-244-661-11	330
R418	1-244-661-11	330
R419	1-244-661-11	330
R420	1-244-643-11	56
R421	1-244-643-11	56
R422	1-244-679-11	1.8 k
R423	1-244-679-11	1.8 k
R424	1-244-693-11	6.8 k
R425	1-244-693-11	6.8 k
R426	1-244-671-11	820
R427	1-244-671-11	820
R428	1-244-715-11	56 k
R429	1-244-715-11	56 k
R430	1-244-661-11	330
R431	1-244-661-11	330
R432	1-244-715-11	56 k
R433	1-244-715-11	56 k
R434	1-244-702-11	16 k
R435	1-244-702-11	16 k
R436	1-244-685-11	3.3 k
R437	1-244-685-11	3.3 k
R438	1-244-659-11	270
R439	1-244-659-11	270
R440	1-244-677-11	1.5 k
R441	1-244-677-11	1.5 k
R442	1-244-685-11	3.3 k
R443	1-244-685-11	3.3 k
R444	1-244-695-11	8.2 k
R445	1-244-695-11	8.2 k
R446	1-244-709-11	33 k
R447	1-244-667-11	560
R448	1-244-702-11	16 k
R449	1-244-702-11	16 k
R501 (R551)	1-242-713-11	47 k
R502 (R552)	1-242-745-11	1 M
R503 (R553)	1-242-681-11	2.2 k
R504 (R554)	1-242-737-11	470 k
R505 (R555)	1-242-661-11	330
R506	1-242-719-11	82 k
R507 (R557)	1-242-691-11	5.6 k
R508 (R558)	1-242-659-11	270
R509 (R559)	1-242-705-11	22 k
R510 (R560)	1-242-653-11	150
R511 (R561)	1-242-735-11	390 k
R512 (R562)	1-242-701-11	15 k
R513 (R563)	1-242-689-11	4.7 k
R601 (R651)	1-244-712-11	43 k
R602 (R652)	1-244-704-11	20 k
R603 (R653)	1-242-663-11	390
R604 (R654)	1-242-737-11	470 k
R605 (R655)	1-242-735-11	390 k
R606 (R656)	1-242-701-11	15 k
R607 (R657)	1-242-735-11	390 k
R608 (R658)	1-242-691-11	5.6 k
R609 (R659)	1-242-665-11	470
R610 (R660)	1-242-675-11	1.2 k
R611 (R661)	1-242-695-11	8.2 k
R612 (R662)	1-242-709-11	33 k
R613 (R663)	1-242-669-11	680
R614 (R664)	1-242-655-11	180
R615 (R665)	1-242-699-11	12 k
R616 (R666)	1-242-691-11	5.6 k
R617	1-242-719-11	82 k
R701 (R751)	1-242-717-11	68 k
R702 (R752)	1-242-705-11	22 k
R703 (R753)	1-242-677-11	1.5 k
R704 (R754)	1-242-705-11	22 k
R705 (R755)	1-242-677-11	1.5 k
R706 (R756)	1-242-699-11	12 k
R707 (R757)	1-242-677-11	1.5 k
R708 (R758)	1-242-687-11	3.9 k
R709 (R759)	1-242-695-11	8.2 k
R710 (R760)	1-242-689-11	4.7 k
R711 (R761)	1-242-661-11	330
R712 (R762)	1-202-591-11	5.6 k ±10% ½W composition
R713 (R763)	1-242-717-11	68 k
R714 (R764)	1-242-661-11	330
R715 (R765)	1-242-661-11	330

Ref. No.	Part No.	Description			
R716 (R766)	1-202-525-11	10	±10%	½W	composition
R717 (R767)	1-202-565-11	470	±10%	½W	composition
R718 (R768)	1-242-665-11	470			
R719 (R769)	1-242-725-11	150 k			
R720 (R770)	1-242-725-11	150 k			
R721 (R771)	1-242-681-11	2.2 k			
R722 (R772)	1-242-681-11	2.2 k			
R723 (R773)	1-242-649-11	100			
R724 (R774)	1-242-681-11	2.2 k			
R725 (R775)	1-242-681-11	2.2 k			
R726 (R776)	1-242-673-11	1 k			
R727 (R777)	1-242-649-11	100			
R728 (R778)	1-242-649-11	100			
R729 (R779)	1-242-673-11	1 k			
R730 (R780)	1-242-649-11	100			
R731 (R781)	1-242-625-11	10			
R732 (R782)	1-242-619-11	5.6			
R733 (R783)	1-205-802-11	0.47	±10%	2W	wirewound
R734 (R784)	1-205-802-11	0.47	±10%	2W	wirewound
R735 (R785)	1-242-619-11	5.6			
R736 (R786)	1-242-625-11	10			
R737 (R787)	1-242-649-11	100			
R739	1-242-677-11	1.5 k			
R740 (R790)	1-242-649-11	100			
R741 (R791)	1-244-705-11	22 k			
R801	1-244-665-11	470			
R802	1-244-665-11	470			
R803	1-206-147-11	100	±10%	3W	metal-oxide
R804	1-244-683-11	2.7 k			
R805	1-244-649-11	100			
R901	1-244-697-11	10 k			
R902	1-244-697-11	10 k			
R903	1-244-739-11	560 k			
R904	1-244-739-11	560 k			
R905	1-244-719-11	82 k			
R906	1-244-719-11	82 k			
R907	1-202-645-11	1 M	±10%	½W	composition
		(USA, Canada Model only)			
RV201	1-221-966-11	100 k(B), adjustable			
○ RT301	1-222-952-11	15 k(B), adjustable			
RV401	1-222-948-11	3.3 k(B), adjustable			
RV601 (RV651)	1-222-375-11	250 k(S), variable (VOLUME control)			
RV603 (RV653)	1-222-373-11	50 k(S), variable (TONE control)			
RV604 (RV654)	1-222-374-11	50 k(B), variable (TONE control)			
RV701 (RV751)	1-222-981-11	10 k(B), adjustable			
RV702 (RV752)	1-222-981-11	10 k(B), adjustable			

Note: ○ { USA Model . . . . Serial No. 810,401 and later
Canada Model . . Serial No. 700,301 and later
EP Model . . . . . . Serial No. 553,001 and later

SWITCHES

Ref. No.	Part No.	Description
S1	1-514-761-00	rotary (FUNCTION (1))
S2	1-514-762-11	lever (FUNCTION (2))
S3	1-513-338-12	lever (MONITOR)
S4	1-514-508-11	rotary (MODE)
S5	1-513-149-00	push (LOUDNESS)
S6	1-514-511-12	lever (HIGH FILTER)
S7	1-513-338-12	lever (MUTING)
S8	1-514-507-00	rotary (SPEAKER)
S9	1-514-911-00	lever (POWER) (EP, UK and AEP Model)
	1-516-416-00	lever (POWER) (Canada and USA Model)
S10	1-514-524-11	slide (DE-EMPHASIS)

FILTERS

Ref. No.	Part No.	Description	(Color)	(Specified Center Freq.)
CF201 CF202 CF203 CF204 CF205 CF206	1-403-562-11	fm i-f, ceramic	red	10.70MHz
	1-403-562-21	fm i-f, ceramic	black	10.66MHz
	1-403-562-31	fm i-f, ceramic	white	10.74MHz
	1-403-562-41	fm i-f, ceramic	green	10.62MHz
	1-403-562-51	fm i-f, ceramic	yellow	10.78MHz
▲CF301	1-403-153-00	filter, ceramic; 455 kHz		
LPF401	1-231-088-00	filter, low-pass		

Note: ▲ { USA Model . . . . Serial No. up to 810,400
Canada Model . . Serial No. up to 700,300
EP Model . . . . . . Serial No. up to 553,000

MISCELLANEOUS

Ref. No.	Part No.	Description
	1-231-057-12	encapsulated component, 120 Ω + 0.033 µF (USA, Canada and EP Model)
J901, J902	1-507-265-00	jack, AUX, HEADPHONE
	1-507-268-00	phono jack, 8-P
CNJ901	1-509-029-02	REC/PB connector
CNJ902	1-509-341-12	AC outlet (USA and Canada Model)
	1-509-546-00	connector, ac input; 3-p (AEP and UK Model)
	1-517-021-00	socket, meter lamp
PL904	1-518-012-04	lamp, meter 8V 0.15A
	1-518-051-12	lamp, STEREO 4.5V 40mA
	1-518-070-00	lamp, dial 8V 0.3A
M901	1-520-090-00	meter, TUNING
	1-526-165-00	voltage selector (EP Model)
	1-526-520-00	voltage selector (AEP and UK Model)
F901	1-532-237-00	fuse, 3.15A (AEP and UK Model)
	1-532-214-00	fuse, 5A (USA and Canada Model)
	1-532-250-00	fuse, 1.6A (EP Model)
F902	1-532-204-00	fuse, 2A
F903	1-532-074-00	fuse, 200 mA (AEP and UK Model)
F904	1-532-350-00	fuse, 5A
F905	1-532-350-00	fuse, 5A
	1-533-051-00	socket, dial lamp
	1-533-082-00	holder, fuse; 5-p (AEP and UK Model)
	1-534-587-11	cord, power (EP Model)
	1-534-526-21	cord, power (USA, Canada Model)
	1-536-179-00	terminal strip, 1L1 (C)
	1-536-181-00	terminal strip, 2L1 (C)
	1-536-189-00	terminal strip, 1L1 (B) (USA, Canada Model only)
TM901	1-536-286-00	terminal strip, 4-p (ANTENNA)
TM902, 903	1-536-284-00	terminal strip, 4-p (SPEAKER)